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Original Communications.

TWO CASES OF DOUBLE SPONTANEOUS DISLOCATION OF THE LENS.

By HENRY W. WILLIAMS, A.M., M.D., Boston, President of the American Ophthalmological Society.

ON July 13th, 1869, I saw Mr. M., a healthy man of 35, who gave me the following history:—

At about 18 years of age he was told that his iris quivered in both eyes; and this he had himself been able to observe on looking in a mirror. Probably the suspensory attachments of the crystalline were even then relaxed or separated to a greater or less extent.

About a year and a half since, the lens of the right eye passed through the pupil into the anterior chamber, and this phenomenon has been repeated, at intervals varying from two or three weeks to as many months; always occurring when he stooped or made an effort in lifting. Usually, he has been able to replace the lens by shutting himself for a few moments in a dark closet. The displacement has not generally been accompanied with pain.

He has noticed that when he leaned his head towards the right he saw better, when towards the left he scarcely saw at all with this eye. He wears No. 6 concave glasses, and with these reads No. xxx. of test types at ten feet distance with his left eye. Vision good for reading with this eye.

Four days before I saw him, the right lens became displaced into the anterior chamber, and has remained there, giving him a dull pain in the globe, and causing very slight injection. It appears like a large drop of oil between the cornea and the iris. The pupil is considerably dilated, and the iris is distended by the over-lying lens.

He was placed upon his back in a dark room, and the cornea was gently rubbed with the upper lid, until, after a few minutes, the lens slipped back into the posterior chamber. When his head was upright the lens now covered the inner half of the field of the pupil; when the head was leaned towards the right shoulder nearly the whole field of the much dilated pupil was covered by the lens; but when it leaned towards the left shoulder the margin only of the lens was visible at the inner edge of the pupil. Evidently the displacement was lateral, without any tilting backwards.

When the lens was nearest its normal position he saw, with his No. 6 *concave* glass, nearly as well as with the other eye; when it was laterally displaced he saw best with No. 6 *convex*.

On examination with the ophthalmoscope the fundus of both eyes seemed normal. The iris was tremulous in the left eye, and there can be no doubt that in this eye also the attachments of the suspensory ligament have given way to some extent; but as the pupil in this eye was contracted, as a consequence of the large dilatation in the right eye, it was not possible to determine how much dislocation of the lens existed unless after artificial enlargement of the pupil, to which it was not desirable to resort lest anterior displacement might perhaps occur in this eye.

Three large doses of extract of calabar bean were put into the right eye; producing, at the end of an hour, an evident though but slight diminution in the size of the pupil. This proved, however, insufficient to prevent the lens from again falling into the anterior chamber on his making a slight movement forward. It was again replaced, by friction upon the cornea, and he was kept on his back, but not in the dark, for some time longer. But even the slight effort of rising from his chair, without any perceptible forward movement of the head, sufficed to again propel the lens through the pupil. It is not unlikely that some accommodative effort of the eye may have had an agency in the displacement.

Replacement being once more effected, he was dismissed with directions to put a square of calabar gelatine into the eye every hour, in the hope that sufficient contraction of the pupil might be induced to form a permanent barrier to the escape of the lens into the anterior chamber.

The next day the friend who accompanied him reported to me that the lens had been several times displaced. He was advised to remain quiet during the day and to continue the calabar, and, if necessary, to report to me the next morning before setting out for his home.

He was also cautioned that he must avoid sudden exertion, lifting, &c.; since he might thus dislocate one or both lenses.

Nov. 11th, 1869.—A boy of about 12 years of age was brought to the Ophthalmic Clinique at the City Hospital, both of whose eyes exhibited partial lateral displacement and slight opacity of the crystalline. His mother was sure he had not good vision; but its exact amount could not readily be ascertained on account of the mental imbecility of the patient.

December, 1869.

CASE OF ABSCESS OF THE LIVER,

Discharging Sero-purulent Matter and numerous supposed Biliary Calculi from an Opening in the Hollow of the Umbilicus, and continuing nearly a Year.

By George W. Doane, M.D., Hyannis, Mass.

Mrs. C., of this vicinity, aged 80 years last June, while visiting her daughter in Boston, was seized about the first of December, 1868, with severe pain in the right side over the liver, which continued about three weeks and then subsided, so that she was comfortable and about house. In about two weeks after, discovered quite a sized tumor over the region of the gall-bladder, as nearly as they can describe it to me, which was not painful in the least on pressure, and which gradually commenced to settle down until it reached the hollow of the umbilicus, when it became purple, and broke, after being poulticed a few days, about the first of March, and soon discharged the first calculus. It continued to discharge one or two at a time every two or three days up to the 23d of October, when, after experiencing quite severe pain for three days, eight calculi were discharged at one time, and no more have appeared since. The calculi are about the size of common peas—some larger and some smaller—of irregular shape, generally approaching the form of a square; some lighter and some heavier than water, of a resinous, oleaginous appearance, of dark-yellow color, and not looking like those that I have seen passed by the natural channels of the body. The friends judge that as many as a hundred of these bodies must have been discharged since last March.

The query in this case is, where do these bodies come from. The gall-bladder I have always supposed to be the only place where biliary calculi are formed, and if so, why is not the bile also discharged along with the calculi in this case; or are these concretions, lumps of inspissated bile from some other part of the liver? I can find but few cases on record of calculi being discharged from the side, and none of these state whether bile accompanied the discharge or not. A chemical analysis might probably show their composition and origin; and such concretions, perhaps, may form in the tubuli of the liver.

A few more particulars in the history of this case may not be uninteresting. Mrs. C. is not what would be called of a bilious temperament, and has always lived in a dry, sandy place—the last place to engender any disposition to diseases of the liver—and has lived an active, temperate life in every sense of the term. Perfectly healthy, except having a severe cough ever since she was 18 or 20 years of age; several times in her life so severe that her physician thought she could not live. This cough was always considered to be confined to the lungs entirely, but I am induced to think, from its spasmodic character, has been caused by a diseased liver, creating irritation and spasmodic action of the diaphragm, aggravated at times by colds. For the last six or seven years she has been troubled with a burning sensation over the lower part of the right side, and for about the same length of time her urine has been thick and very fœtid, showing that the kidneys were carrying on a vicarious elimination of the effete matters from the body. All this burning sensation of the right side has subsided since the discharge has taken place.

She was under a homœopathic physician while in Boston, and I have no account of the case, except from friends, until I saw her soon after her return home in the early spring. She was then comfortable, and up most of the day. Appetite good. Bowels perfectly regular, and stools natural in color. Slept well and had no pain. I recommended non-interference with the abscess; but as the continued discharge seemed to tell on her system, I advised a plain, nutritious diet, with wine three or four times a day, which has been continued ever since. She has been comfortable through the summer, except for about two or three weeks in September, when she lost her appetite, and her stools became clay-colored. She soon, however, came round right in her stomach and bowels, but has gradually failed in her general strength, and now sits up only three or four hours a day; she is very comfortable every way except the annoyance of her cough. The opening of the abscess is quite healthy, with a slight fungus around it, and an ordinary sized female catheter can be passed without force upwards and to the right about three inches.

[At the request of Dr. Doane, the calculi were sent for analysis to Dr. White, who has kindly sent us the following statement.]

"The specimens you gave me for analysis are what they seem to be—biliary concretions composed of cholesterin and bile pigment. Their laminated structure is the same as is seen in ordinary gall-stone. In the only case of a similar discharge of these bodies through the abdominal wall that I have seen there was, as in this, no escape of fluid bile. James C. White.

"*Boston, December* 8, 1869."

A CASE OF REMARKABLE ENDURANCE.

Reported by John F. Butler, M.D., Chesterfield Factory, N. H.

Mrs. J. W., aged about 34, native of Ireland and the mother of several children, has always enjoyed robust health, with the exception of occasional attacks of epilepsy, until about two years since, when pregnant—some two months prior to confinement—she became violently insane. This attack was recovered from at confinement.

At noon of Oct. 22d, 1869, I was called to visit her, and found her again pregnant, at about seven months. She could, or would give no exact data, and a digital examination was not obtained. She was again insane, but not wildly so, and complained of nothing, yet evidently had slight uterine pains.

Oct. 23d.—Saw her again. She was at a neighbor's house and intensely wild. During the night previous she attempted to kill her husband and children. I gave her an anodyne, and left her, with general directions for her management.

About daylight the next morning she entered a former neighbor's house some one and a half miles from her residence. She was wet to the skin, *perfectly drenched*, cold and shivering, and smeared with blood. The lady upon whom she called immediately changed her clothing, gave her hot drinks, and despatched a messenger for me. I found her lying on a lounge; but on perceiving me she rose and sat up. From her I learned she left home about three or four o'clock, P.M., the day previous, and started across Pistareen mountain to go to her father's. The region will vie in ruggedness with the White Mountains. She wandered about till dark, when, exhausted, she "laid down between two rocks" and gave birth to a pair of twins. Thinly clad, she shivered out the night, and at dawn travelled on again, and arrived where I found her between five and six o'clock, A.M., Oct. 24th. She was calm, pulse 70, and in nowise worse off than most women after confinement under the most favorable circumstances.

Oct. 25th.—Pulse 62. Appetite good, and perfectly comfortable.

Oct. 28th.—Rode home, sitting up in a common buggy.

That a woman could undergo the pains and perils of childbirth alone, lost and half clad, on a bleak mountain and during one of the most violent rainstorms of this inclement season of the year, and not receive detriment therefrom, seems marvellous. *Sed sic est.*

Oct. 30, 1869.

Selected Papers.

IMPORTANCE OF A THOROUGH MEDICAL EDUCATION.

From the excellent Introductory Address of Prof. R. M. Hodges to the Medical Class of Harvard University, we take the following extracts:—

The plan of a thorough medical education compels the student to fathom a multitude of subjects, and the question will naturally be asked, why Surgery should be so much more prominent than many other departments of study, operations in private practice being of comparatively rare occurrence, and many physicians feeling no inclination to undertake them.

The indispensable, but purely technical, art of operative surgery separates medical from surgical diseases; but this arbitrary division does not extend to pathology, which is, so to speak, one and indivisible; and the fact that surgery deals with external diseases, visible to the eye and accessible to the touch, makes it an invaluable field in which to study, not merely the elements or certain isolated fragments of pathological inquiry, but almost its entire range.

The hidden phenomena of an inflamed lung are rendered visible in the development and progress of an ophthalmia; a fracture of the neck of the thigh-bone in old age, and the rupture of a fatty heart, can be made mutually to explain each other. It is this distinguishing feature of an external pathology, by which the whole science is irradiated, and not what it accomplishes in the treatment of diseases, or the methods adopted for their cure, which makes surgery so conspicuous in the list of medical studies.

In the early part of the present century surgery received an impetus in France, at that time the unquestioned centre of its cultivation, from three eminent men who adorned her capital:—Bichat, the first physiological anatomist; Boyer, who gave to surgery precision and an exact anatomical classification; and Dupuytren, who consummated its alliance with pathology. The surgeons of an earlier period desired to know little beyond anatomy and mechanics; they made scarcely any application of physiological principles, and encouraged no therapeutics except mechanical and instrumental interference. The lessons and the practice of the famous teachers just named, so far in advance of what had previously prevailed, first lifted surgery from a mere handicraft to the loftier position of a systematized and liberal branch of knowledge. The traditional method of studying the dead body became inadequate even for practical uses; and as medicine scarcely acknowledged indebtedness to anatomy, or claimed proficiency in anything except the recognition of symptoms, it was from a surgical point of view solely that the demand came for a new and more comprehensive system of investigation. To the illustrious Velpeau, whose death has but recently occurred, we owe the first attempts at making Human Anatomy an applied science. But forty years have elapsed since the work of that celebrated surgeon was published, yet the changes are already so great, that, in the most modern development of the science, a treatise on Medico-Chirurgical Anatomy blends with the description of normal and pathological tissues the truths of physiology and the facts of clinical observation, while the mere relations of parts fill a position of only subordinate interest. And even the Microscope, which has done so much to unite the sciences of pathology and physiology, is no longer the only interpreter of their intricacies. A conviction that the true nature of morbid growths must be sought in development, rather than structure, suggests fresh fields of inquiry; and chemistry, the effect of the electric current on protoplasmatic structures, the spectrum, which is already applied to the blood in the analyses of toxicology, or still newer methods of exploration, may yet accomplish that which the best lenses have been unable to achieve.

It has justly been remarked, "that each grand epoch in the art of medicine has derived its impulse from a new anatomy, originating a higher physiology and theory of disease." The rude anatomy of animals, which Galen applied to man, revolutionized the deeper empiricism which preceded him. Vesalius, the first to make human dissections, whose only subjects were the putrefying remains of half-buried bodies, which he rescued from the dogs who unearthed them in the cemeteries, was arraigned by the Inquisition for his heretical utterance, that the descriptions of Galen did not apply to man, or accord with the results of dissections. The King of Spain commuted his sentence to an expiatory voyage to the Holy Land; and though he perished by shipwreck on his way home, the light of his anatomical studies illumined the whole of Europe. The discovery of the circulation by Harvey—the important difference between the two roots of the spinal nerves, which was determined by Sir Charles Bell—the phenomena of reflex action pointed out by Dr. Marshall Hall—the researches of Schwann and Schleiden on the development of tissues—each gave a special impulse to medical science. Virchow, by his generalizations of the anatomical knowledge which the microscope for twenty years has been revealing, furnished a new interpretation to the processes of nutrition; and his studies of the connective tissue have given birth to a pathology, which, though it has been greatly criticized, is now almost universally adopted.

The origin and growth of the science of Pathology cover a period of hardly half a century, yet its history serves to show that the medical student must not be content with a knowledge of any single department of anatomy, but that to be a pathologist, or, in other words, a real physician, he must be master of it in its descriptive, topographical, and physiological, as well as morbid aspects.

The complex laws of the human economy are beyond the grasp of one man's term of life; yet the subdivision of their study is admissible only to a degree consistent with a comprehensive acquaintance with the principles on which they are founded. The authors of special researches which have given an impulse to medical knowledge have been, almost without exception, general pathologists, familiar with every term in the series of morbid phenomena, and recognizing their mutual dependence. Although the unarranged elements of Mr. Goodsir's remarkable memoir on the development of the teeth existed in his mind when he was practising dentistry, they were only fully verified and unfolded by his maturer investigations after he entered upon the general practice of medicine and surgery. Their amplification by the light of physiology and pathology gave a practical character to his researches, and his paper is still counted as among the most famous in the archives of anatomy.

Comprehensive proficiency was an element of Hunter's great success. He devoted ten years to the study of human anatomy. What he could not find there he sought in comparative anatomy. That which the dead body did not reveal he sought for in the living animal. Anatomy, experimental physiology, clinical observation, and pathology, were each made the coadjutor of the others. We do not realize how much of surgical science is due to this great observer. The later use of the microscope has made the discoveries of which he was the pioneer such common property that it seems as if they must always have been known ; for it is scarcely to be credited that they date back only to a period which is almost within the memory of some in this audience.

The generalizations which experience tends to establish lead to the conclusion that morbid phenomena are not ordinarily due to causes of local origin, but that they consist chiefly in a modification, either qualitative or quantitative, of the normal functions, or of the growth and nutrition of the body. A right comprehension of disease involves, therefore, as a fundamental principle of modern medicine, the idea, that, if one member suffers, the others suffer likewise.

There can be, consequently, no partial or divided acquisition of our profession ; and yet young men, while still engaged in their preparatory training, are sometimes led to devote exclusive attention either to medicine or to surgery. Fascinated by the spectacle of surgical operations, or by the skill of the operator, and impressed with the magnitude of the results produced, some among them are induced to slight medical studies, and to overestimate the significance of procedures which constitute but a single item in the accomplishments of a surgeon, and really require but little intelligence for their performance. The most famous teacher of Operative Surgery in Paris, when I was a student, the elegance and dexterity of whose demonstrations attracted even Hospital Surgeons into the circle which crowded around him, had never been able to acquire enough medical knowledge to graduate in medicine, although he had twice been before the Faculty.

On the other hand, the thoughtful procedures of etiology and diagnosis, which are the peculiar triumphs of medicine, excite an interest in certain zealous students, who are so charmed by the varying modifications of pathological action that they disregard the opportunities for instruction in surgery, or inadequately master anatomy, and are hence incompetent in practice to render the first services in cases of accident or sudden surgical emergency.

The degree of *Medicinæ Doctor* requires an acquaintance with all the separate and special points of professional study, and it is a mercantile rather than a scientific spirit which attempts to apply to medicine the division of labor approved in industrial pursuits. The distinguishing feature of modern surgery, says one of its most learned interpreters, is the endeavor to unite in itself the whole of medical knowledge. No narrow proficiency or shallow sciolism can ever reach the culminating pinnacle which crowns the medical fabric.

The study of Pathology is of such exhaustless range, its pursuit occupies so much time and demands a knowledge of so many special subjects, that it is difficult for physicians engaged in active practice to follow its investigations in all their detail, except at second hand, through the medium of books, or of specimens preserved and prepared in such a way as to be accessible for examination.

The collection of preparations is one of the great agencies by which science, in all its departments, is advanced. If facts and phenomena which seem at the moment utterly incomprehensible are still kept in sight, they often subsequently prove at least partial interpreters of truths sought, the inferences of to-day becoming the demonstrations of to-morrow. A well-ordered museum is an instrumentality always at hand and available, by which ideas are profoundly fixed in the memory, through a direct appeal to the senses.

The greatest men of our profession have felt that they could in no way advance its interests more effectually than by devoting a part of their energies to the formation of such collections.

It was not to immortalize his name, or merely to fill up the spare hours of youthful leisure, but with an ever-present consciousness that he was sacrificing to his chosen studies the emoluments of a lucrative and much needed practice, that John Hunter devoted himself to the labors which first gave to pathology the form and character of a science. "It was amid the jeers of the medical market-place" that he toilsomely accumulated the invaluable specimens which form an important part of that magnificent Hunterian Museum, now universally considered "the greatest of English contributions to the science which it illustrates."

William Hunter, who is acknowledged to have given to the study of obstetrics its modern impulse, who was the teacher of Matthew Baillie in morbid anatomy, and of his brother John in surgery, also left a museum of his own collecting, which at his death was valued at twenty thousand pounds. The greater part of it is now in the possession of the University of Glasgow, to which he bequeathed it, and it still subserves the uses for which it was destined.

Dupuytren, whose famed clinical instruction did so much to popularize the study of pathology, was prevented only by his sudden death from making provision in his will for the erection of a pathological museum. With his dying breath he enjoined it upon his friend Orfila to carry out his design. The superb museum which is now one of the glories of the medical school of Paris bears upon its front the inscription, that it was erected in 1835, "at the expense of the Government, through the efforts of Orfila, Dean of the Medical Faculty of Paris, and named the Dupuytren Museum, in honor of the memory of a great man, and in grateful recognition of a legacy of two hundred thousand francs bequeathed by that professor for the endowment of a chair of Pathological Anatomy."

The late Dr. John C. Warren presented to this institution, together with a sum of money for its increase, the nucleus of a museum, which by constant accessions has now become one of the richest in the country. To the untiring zeal of the Professor of Pathological Anatomy in this University Boston is mainly indebted for two invaluable collections, the museum just named, and that of the Boston Society for Medical Improvement. Their union would be little more than a just acknowledgment of his lifelong devotion to the study and teaching of pathology. Gathered into one repository, they would be a superb illustration of what may be accomplished by a single individual, and might transmit to posterity, in connection with a name which has been honored in this community through five generations, a legacy which time alone is able to amass, and from which science and education would derive unfailing returns.

The attractions of surgery to medical students have been already alluded to. It cannot be denied that its fascinations are largely due to the excitement of witnessing operations, and to the brilliant manner in which they are often performed. But as it is not the whole of medicine to give physic, so it is not the whole of surgery to practise operations. Our own time has witnessed the birth of a conservatism which teaches us not only to avoid them, but to limit the extent of mutilation when they are rendered imperative; it has also signalized the preventive efficacy of a good hygiene, and of patience on the part of the surgeon not less than on that of the sufferer. In the hospital for the disabled veterans of the French army there are found three who have recovered from gun-shot fractures of the thigh for one who has survived its amputation, and it was a remark of Velpeau that the older he grew the less he amputated. Much of that habit of interference which was once the chief characteristic of surgery has been abandoned. Its meddlesome dressings and harassing apparatus have gone out of use, or have been so simplified that we can with difficulty understand some of the paraphernalia described by authors whose writings are still current.

Although erudition, experience, acute observation, and exactitude are qualifications demanded in solving the enigmas of surgical diagnosis, the exigencies of surgical therapeutics are not less comprehensive. Besides these attributes of intellect there are others of temperament and character which must be superadded to the technical gifts of delicacy and decision of touch. Self-possession, in-born or acquired, is an indispensable trait, but there is nothing to commend in the boldness often so highly esteemed. It is no credit to the surgeon that he can trifle with the life of his patient in performing with insufficient reason, no matter under what importunities, an operation almost certain to be fatal —or if, tempted by the charm of its difficulties, he cannot reply to the questionings of conscience, that he does only to others what he would have others do to him. * * *

Influenced by the unexpected developments of science, which have thrown light upon the treatment of disease, and informed us better and more surely as to the object and competency of our efforts, medicine has made a progress in recent years which is rivalled by scarcely any other avocation. The most eminent lawyers and divines are perhaps wiser than their distinguished predecessors; but the existing race of physicians is certainly far above that which went before it. To this general advancement our Medical School has contributed an influence by no means inconsiderable, or limited to the Commonwealth with whose name it is identified.

In this day of its prosperity, one cannot but look back and contemplate with feeling the painful sense which the brothers Hersey, the first benefactors of the medical department of the University, must have entertained of the deficiencies of their own penurious education, when they devoted so liberal a share of their hard earned fortunes to the foundation of two of its still existing professorships, that they might avert from those who should come after them the bitter perplexities of uncertain and imperfect knowledge, which so often kept them company as they floundered through the winter snows or toiled in summer heats along the sands of Cape Cod, in the solitary rides of a practice which is said to have extended from Hingham to Provincetown.

Medical science is so seduously cultivated by all civilized nations that no particular country can claim to stand at the head of this branch of learning. France once did, but she has been reluctantly driven to concede that science cannot be isolated, or kept exclusively within the limits of any realm. The dynamic forces of constant interchange of ideas and concert of action in research have accelerated its advancement in all quarters of the globe. National authorities, as well as individuals, have contributed liberally to its promotion.

Our own government did not forget the opportunity afforded by the recent conflict to construct a National Museum of military medicine and surgery, which has been pronounced as, " beyond all doubt, the most curious, the most instructive, and the most complete in the world "; nor did it neglect to turn its misfortunes to a good use in the investigation of important professional subjects on a larger scale than had previously been possible. The elegantly illustrated Circulars in which the results of these exhaustive researches are promulgated have been distributed both at home and abroad with great liberality. Although American authorities have long been quoted with respect in the various departments of medical learning, these elaborate papers can hardly fail to enhance the interest with which a knowledge of opinion in this country is already sought.

Reports of Medical Societies.

THE NEW MEDICAL SOCIETY, WASHINGTON, D. C.

The second meeting of the new Medical Society was held on Thursday evening, Dec. 23d, Dr. Robert Reyburn, the President, in the chair, and Dr. Gray Secretary.

Dr. Loomis thought there should be a constitution adopted by the Society, as in their present status any one had the right to take part in the transactions of the meeting, whether regular physicians or not. The homœopathic practitioner could come here as well as others and take part in the proceedings, when there could be no affiliation with them professionally.

Dr. Stephenson, from the Committee on Constitution, submitted a report, which was read, and afterwards taken up and considered, section by section. It provides that the name of the association shall be " The National Medical Society of the District of Columbia; " the objects of the Society to be the protection of its members who have diplomas as doctors of medicine; the time of meeting to be on the fourth Tuesday in each month; the delegates to the American Medical Association to be elected at the monthly meeting in March.

On the question of admitting all resident physicians who can show the requisite diplomas, Dr. Southworth moved that no person shall be admitted as a member who advertises further than his name, residence and office, which was laid over for the time.

Dr. Stephenson stated that the Committee on Credentials would make admission a personal matter as a rule.

Dr. J. Edwin Mason called the attention of the Association to the fact that the American Medical Association, at the meeting in this city, in 1868, had decided not to recognize females or colored men as members.

Dr. Loomis stated that the Association in question had generally made regulations to suit the locality in which they met, and he recommended that if this society adopt their code of ethics, it be with the understanding that they reject so much of it as conflicts with the constitution of this society.

Dr. Mason said he had been assured that no bill could pass Congress, granting them a charter, unless it gave the privilege to the female sex of studying and practising the science of medicine. After considerable discussion, it was finally decided to adopt that section of the constitution giving the right to females and colored persons. The fee for admission was fixed at $5, and an annual assessment on each member not to exceed $10, was agreed upon.

On the question of adopting a code of ethics used by the American Medical Society, Dr. Loomis moved to amend so that it might not conflict with the constitution of this society, which was discussed at considerable length, and afterwards rejected.

Dr. Stevenson moved that a committee of three be appointed on ethics, and that this subject be referred to it for consideration, and to report at the next meeting of the society; which was agreed to, and the chair appointed Doctors Newman, Johnson and Tucker the committee.

The constitution was discussed at some length, and after it had been considered section by section, it was agreed to refer it back to the committee to be engrossed after verbal corrections.

Dr. Southworth asked to be informed as to the mode of advertising, as some were under the impression that they could advertise as they pleased.

This matter was left for the management of the Committee on Credentials and Ethics.

The Society adjourned to meet on Tuesday evening, Dec. 28th.

Bibliographical Notices.

Percussion and Auscultation as Diagnostic Aids. A Manual for Students and Practitioners of Medicine. By Dr. Carl Hoppe, Assistant Physician to the Sixth Westphalian Regiment of Infantry. Translated by L. C. Lane, M.D. Philadelphia: J. B. Lippincott & Co. 1869. 12mo. Pp. 152.

In the preface of this little book the author says, "It cannot be denied that auscultation and percussion have long failed to serve their proper purpose." With this most of our readers will readily agree. It is well known that comparatively few physicians in private practice have even a tolerably good knowledge of auscultation and percussion. This is, we think, not generally on account of "want of leisure to study comprehensive works on this subject," but is due to a want of system in the instruction given to the student, and to the same want of system in most text books. We recognize the phenomena obtained by auscultation and percussion in the same way as we recognize musical sounds, and they should be studied in the same way. We can by repeatedly playing a certain combination of notes so impress it upon the mind of a listener, that he will after a while remember it; or, in other words, know the tune. But if we give him the score, the intensity, pitch, quality and duration of each note, he will be able to reproduce it at any time with absolute certainty. In the same way we may ask a student to listen to a physical sign within the chest, *e. g.* bronchial respiration. He may remember its characters so as to be able to recognize it at a future time, but it will probably be necessary for him to listen many times before he would feel confidence in his ability to do so. But if in this case we direct his attention to the combination of pitch and quality in inspiration, with duration, pitch and quality in expiration, and tell him that these denote bronchial respiration, and never denote anything else, we give him a key which will always be available, and which he can apply with certainty years after he has heard the sign.

Auscultation and percussion have usually been acquired in the former way, *i. e.* by rote, but now they are beginning to be taught in the latter. Most of the sounds derivable from auscultation and percussion can be so analyzed with reference to their intensity, pitch, quality and duration, that so long as the student remembers the analysis he will not be in doubt with regard to the character of thoracic signs. A physician can, after much clinical experience (and most of our hospital physicians do so), learn by rote the thoracic signs. Physicians in private practice have not the "material" to enable them to do this. Fortunately our teachers are now beginning to appreciate that sound produced within the chest should be studied in exactly the same way as sound produced anywhere else, and the proficiency which students quickly attain by this method is proof of its worth. It is sometimes objected that such a system is not generally available, because those unacquainted with music cannot appreciate variations in pitch, &c., but it is the experience of those who have given such instruction that with good attention almost any ear soon becomes sufficiently educated to use these tests.

In the book before us this method is applied particularly to percussion, and the book would have been more complete if it had been applied also to auscultatory sounds.

About forty pages are given to the subject of percussion. After speaking briefly of the manner of making percussion, the regions of the chest, and the different theories of the origin of sound produced by percussion, the author proceeds to speak of the *phenomena peculiar to the sound produced by percussion.* He says the sound may vary according to its (1) intensity, (2) highness or acuteness (*i. e.* pitch), (3) timbre or quality, (4) duration. He then considers the conditions which may influence sound in each of these particulars. A chapter each is given to intensity, pitch and quality, but he says so little difference in the duration of sound within the body is perceptible, that it is better not to take this property into consideration.

The scientific way in which the subject is treated may be judged from the following example. "There are fewer conditions or qualifications in the height of the sound than in its intensity. (1) The smaller the vibrating mass that is the volume of the air-containing parenchyma, the higher is the sound; the greater the mass, the deeper the sound. * * * * (2) The degree of tension of the parenchyma of the lungs, or the walls containing the air. The greater this tension, the higher is the sound; the less the tension, the deeper is the sound. * * * * The lower parts [in pleuritic exudation] contain no air, the upper parts but little. In this condition the sound from below the clavicle of the affected side, which was at first loud, deep and tympanitic, is rendered dull in a downward and lateral direction. The question arises, whence this depth of sound? On the affected side the volume and tension of the lung have decreased. Diminution of the volume increases the height of the sound, diminution of tension increases the depth of the sound. Since it is deeper now the diminution in tension must be the greater. The longer the sound wave the deeper the note produced. The longer the sound wave the less frequently are its vibrations repeated in a second, and consequently the smaller is the number of vibrations. The number of vibrations, or the height of the sound, is equal to the tension divided by the volume, or $h = \frac{T}{V}$. If the diminution in volume is greater than the diminution in tension, the sound becomes higher. This finally occurs where the exudation increases. Then the sound underneath the clavicle of the affected side is higher."

This statement will be objected to by those who have been taught that tympanitic resonance is always high in pitch, yet we believe that clinical experience will bear out the author. Objection will certainly be made to the statement that "in pneumothorax the sound on the affected side is *tympanitic* and *deep,*" on account of the length of the vibrating column of air, but we must remember that our cases of pneumothorax are usually complicated by a pleuritic effusion, which would of course affect the results of percussion. In the only case which we have ever seen of pneumothorax uncomplicated, throughout its course, by liquid effusion, we were particularly struck by the low pitch of the percussion note.

In Chapter III. the Timbre or Quality of Sound is discussed under two heads, the (A) Tympanitic, and (B) Metallic; and at the end of this chapter is a section on the Relations of Percussion to the Normal Thorax, and one on Pectoral Fremitus. In speaking of the Tympanitic Timbre the author says, "The difference between intensity and highness is most readily to be distinguished in this sound." We do not understand how there can ever be any possibility of confounding characteristics of sound totally different in their nature. The author dwells upon one fact in regard to tympanitic sound which perhaps we do not sufficiently consider in practice, and that is that where there is very great distention of the walls of the cavity, whatever it may be, the tympanitic sound is liable to be lost entirely. A clear distinction is not made between the Tympanitic and Metallic Timbres, both being described as ringing sounds. In speaking of that variety of the tympanitic known as the cracked metal sound, the author says, "For the production of this sound, it is also necessary that the thoracic wall be thin and yielding, the cavern *tolerably large,* and situated superficially, and in free communication with the bronchus. Of course these conditions are fulfilled in the case of the *smallest* caverns"; which is not very intelligible.

It is noticeable that in this chapter on Timbre nothing is said about that peculiar quality of resonance which we get by percussing over healthy lung tissue. This we consider a serious omission, for the quality of vesicular resonance is very characteristic, and cannot be obtained except by percussing over lung vesicles.

The author makes a mistake, we think, in comparing for purposes of diagnosis two different regions on the same side of the chest, instead of the same regions on opposite sides. In the section on the Relations of Percussion to the Normal Thorax, after stating that in the infra-clavicular region the percussion sound is louder than anywhere else on the thorax, he says, immediately below, that if the sound in the fossa supra-clavicularis seems dull in comparison with that in the infra-clavicular region, the former must be considered in an abnormal state. This latter statement is certainly erroneous. In a large majority of healthy chests there is dulness in the region above, compared with that below the clavicle.

The chapter on Auscultation of the Respiratory Organs occupies only thirty-six pages. In the beginning is the following careless statement:—"The sounds perceived over these organs are divided into respiratory sounds, produced by the passage of the air along the walls of the respiratory organs, and rattling sounds, or rhonchi, which are produced by the meeting of air and water in the air passages." It is manifestly improper to call all the adventitious sounds *rattling* sounds, and certainly much more so to say that they are produced by the meeting of air and *water*. The subject is then considered under the following heads:—(A) Respiratory murmurs—(B) Rhonchi—(C) Auscultation of the Voice—(D) The Frictional Rhonchi—(E) Auscultation of Coughing. The respiratory murmurs are divided into the (*a*) vesicular, (*b*) bronchial or loud, (*c*) indefinite, (*d*) expiratory murmurs, (*e*) the interrupted respiratory murmur, and are despatched in a dozen pages. We here see important omissions which would not have occurred, had the author set out with the intention of considering the auscultatory signs in the same way as those of percussion—viz., with reference to their intensity, pitch, quality, and duration. No mention is made even of a difference in pitch or quality between the inspiratory and expiratory murmur of health. To speak of the bronchial or *loud* respiratory murmur will be readily admitted to be erroneous, for it is often so feeble as to be scarcely heard, and immediately after the author himself says "the sound appears loud or weak."

Division (*c*) includes every respiratory murmur not purely vesicular or bronchial. It includes what we formerly knew as "harsh," more recently as broncho-vesicular, and also *one variety* of cavernous respiration. We like the term indefinite for those respiratory sounds whose character is indefinite, but we also like the term broncho-vesicular for that respiration where both the bronchial and vesicular qualities are so evident to the ear. There is no doubt in our own mind that a large cavity with flaccid walls does give us at times a respiration which we can properly call cavernous, and which is characteristic, viz., a hollow, blowing sound (not tubular) of low pitch, with an expiration lower in pitch than the inspiration. There is nothing vesicular and nothing tubular in the quality of this sound. Dr. Flint insists strongly upon these characteristics of cavernous respiration, but they are also recognized by Walsh, Barth and Roger, and Da Costa. Division (*d*) seems inappropriate, as the expiratory murmur cannot well be considered as a separate respiratory sign, but as one act of all the respiratory murmurs. In the section on râles is considerable bad nomenclature; *e. g.*, sonorous râles are called *rattling*, and the term *vesicular crepitation* is applied to moist râles produced in cavities and bronchi, as well as in the air cells. At the top of page 69 nervous asthma is made synonymous with acute dry catarrh, a synonymy which probably few of our readers will be prepared to accept.

The explanation of the mechanism of the minute vesicular crepitation is accorded to Wintrich. This explanation (viz., by the sudden dilatation of air cells and small tubes, which had become agglutinated), was first given by the late Dr. Edson Carr, of Canandaigua, N. Y., who in 1842 made a communication to the *American Journal of Medical Sciences* on this subject. Wintrich himself gave Dr. Carr the priority.

Chapter II. treats of the Auscultation of the Organs of Circulation. The auscultatory phenomena are divided into Tones and Murmurs. In the first eight pages of this chapter, by the gross carelessness probably of translator, or proof-reader, the term *murmur* is employed seventeen times where *tone* should have been, which of course makes nonsense of the text. On p. 116, line 11, the sense is spoiled by the substitution of the word tone for murmur. The same thing occurs from the improper use of the word murmur in the third line of p. 125. The term sound is frequently substituted for tone, which, as a division of the auscultatory phenomena has been made into tones and murmurs, and nothing has been said about sounds, is likely to confuse a young student.

In speaking of the tones it is said they are always loudest over the apex, implying that both are loudest here, when certainly the second tone is loudest over the base of the heart, and at the bottom of p. 94 it is so stated.

The author gives it as his opinion that the first sound is caused wholly by the closure of the auriculo-ventricular valves; why he calls these *venous* valves we cannot imagine. Such statements as the following are likely to mislead and confuse the mind of the student. "The sounds also frequently show deviations from their healthy condition, which, however, may not amount to abnormal murmurs." No deviation of a heart-sound ever amounts to a murmur. A murmur is a new sound altogether, not a modification of one there before, and the expression "*abnormal* murmurs" is bad, for there are no *normal* murmurs.

Farther on, also, we find two sections headed "Diastolic *Abnormal Murmurs*" and "Systolic *Abnormal Murmurs*." On p. 104 the author accounts for the weakening of the aortic second sound in cases of mitral insufficiency in the following manner :—"When the cusps of the mitral do not close, less blood passes into the left auricle; and hence during systole there is less blood thrown into the aorta." Such a statement is absurd. Less blood is sent into the aorta, because a part of what was in the left ventricle goes back into the left auricle, and the left auricle receives *more* blood than it was intended to contain; hence its dilatation is the first pathological sequence of mitral insufficiency.

Traube's method of dividing diastolic murmurs into two kinds is adopted. (1) "*The simple or pure diastolic murmur* is separated from the preceding and succeeding" systole by a distinct pause; "it is heard (*a*) in case of insufficiency of the aortic valves," &c. "(*b*) The pure diastolic abnormal murmur appears if there is perforation of the mitral valve, even when the blood flows with unimpeded current. In diastole the blood flows not merely through the left auriculo-ventricular opening, but also through the perforation into the left ventricle; from the latter current the murmur arises."

(2) "The modified diastolic abnormal murmur. This murmur blends with the succeeding systolic tone without interval, either occupying (*a*) the whole diastole, or (*b*) appearing only at the close of diastole. In the second case the diastolic murmur appears as if it were a premature stroke of the systolic tone. On this account many have denoted it as a presystolic tone." The pure diastolic murmur, as it is called, must occur very rarely at the mitral orifice. The current of blood from the auricle to the ventricle is not usually strong enough to create a murmur until auricular contraction takes place, which is at the end of diastole. The author seems to admit this (*i.e.* the infrequency of the pure diastolic mitral murmur), when a little further on he speaks of the importance of a diagnosis between aortic regurgitation and mitral obstruction, whose murmurs do not occur at the same time. He says nothing of the danger of confounding 1 (*a*) aortic regurgitation with 1 (*b*) perforation of the mitral valve, whose murmurs, according to the author, occur in exactly the same time.

On p. 116 the author says :—"But if the current from the auricle into the ventricle is weak, then neither normal nor abnormal sound is to be heard." The passage of blood from the auricle to the ventricle normally produces no audible sound.

The meaning of the following, to be found on p. 125, is far from being clear. "In this case [stenosis of the left auriculo-ventricular opening] a diastolic murmur may be felt, extending from the apex of the heart to the nipple, *arising from accompanying insufficiency of the mitral valve*; in rare instances a systolic murmur results from the same cause."

The book closes with short sections on Arterial Sounds, Auscultatory Phenomena in Aneurisms and Veins, and Pericardial Murmurs. As an example of the positive manner in which the author makes statements entirely contrary to commonly received opinion without as much as hinting that there is any difference of opinion, we would call attention to p. 135, where it is stated that "the heart always occupies the lowest part of the pericardium distended by fluid."

There is also an Appendix of fourteen pages on the Apex Impulse. The rebounding theory of Gutbrod and Skoda is claimed to be "the only one which readily explains all the phenomena of the apex impulse."

We have commented on the book as it appears in English. Of course some of our remarks would not hold good for the original. In this dress we should not recommend it to those not well acquainted with auscultation and percussion. There is always an objection to a translated text book, for it is often next to impossible for the best of translators to express the exact meaning of an author. Besides this there is in this book altogether too much theory for young students, who want rather clinical facts. For a text book it is not sufficiently systematic, nor is the space well divided among the different topics. Very important subjects are either altogether omitted or but lightly touched upon, while undue prominence and space are allotted to minor topics. An author should not allow himself to digress upon any subjects in which he may be particularly interested, when engaged upon a comprehensive work in which each topic should have space according to its practical importance. Moreover, in this edition careless statements, typographical errors and obscure passages abound.

It may perhaps serve a good purpose in calling the attention of physicians to the assiduous efforts of Skoda, Traube and others, to determine the manner of the production of the signs obtained by percussion and auscultation, according to established laws of physical science. K.

Medical and Surgical Journal.

Boston: Thursday, January 6, 1870.

A NEW YEAR'S GREETING.

According to the arrangement of the publishers of this Journal, announced some months since, a new volume now for the first time begins on the opening week of January instead of February. We embrace the opportunity of wishing our readers a Happy New Year, while we thank them and our contributors for their indulgence during the past year. Though the many able pens of our medical brethren have not sufficiently often illustrated the correlation of forces, by converting the heat of thought into scriptorial motion, it is yet owing to what they have so kindly done for us that we have been enabled to increase the density of our issues. Subscribers have thus been doubly indemnified in quantity of type for the month nominally omitted from the volume which terminated with the year 1869.

It is with great satisfaction that we place upon the title-page the name of H. H. A. Beach, M.D., as Assistant Editor. Dr. Beach has in fact acted in that capacity for a number of months, and in a manner which has left nothing to be desired.

THE EMPLOYMENT OF ERGOT OF RYE IN PARTURITION.

As the old fable had it, the contest was as to the material of which the shield was made. The combatants were both right. Each bore truthful testimony to what he had seen. One had viewed the golden side; the other the silver surface. Neither had looked at both sides.

So it often is with medical observation. One meets with sixty or a hundred cases of a certain class, and from them as data deduces a certain result. Another has had sixty or a hundred cases of the same class, which present some different phenomena from the before mentioned, and reasons with equal logic to the opposite conclusion. The two sets of facts should be put together, and hundreds of others, perhaps added, and then an adequate basis for an opinion may probably be obtained. Thus it has been with the question of re-vaccination, and thus it is with that of the administration of ergot in labor. Relative to this latter topic we propose to get a glimpse of the two sides.

Some practitioners use the spurred rye with great freedom, certain of them being in the habit of anticipating the occasion for its use, and carrying the drug with them to their patients who are to be confined. Twenty grains are employed by one, thirty by another. All are presumed to select cases which are not unsuitable for its exhibition. These obstetricians find that it merely strengthens insufficient uterine contractions, without abolishing the intermittent character, and detect no accidents attributable to its action upon mother or fœtus. Great stress is sometimes laid on the importance of giving just enough and not too much.

Dr. Uvedale West, Vice President of the Obstetrical Society of London, was quoted in the *Lancet* of July 20th, 1861, as saying that in 1855 he had published the particulars and results of sixty-nine cases in which he had administered the ergot of rye, and in which 9 children were still-born—viz., 2 putrid at birth; 2 born after labors preceded and accompanied by hæmorrhage; 1 born footling with hydrocephalic head and consequent compression of funis; 1 in which there was evidence of latent compression of funis; 1 a difficult primiparous forceps delivery; 1 a difficult vectis delivery; and 1 born dead without any assignable cause. These results were considered favorable to the drug by Dr. West; unfavorable, by some critics.

Between Dec. 23d, 1855, and June 22d, 1861, Dr. W. gave ergot in 172 cases, including one case of twins, thus involving 173 children. Of these 173, 5 were stillborn, viz.: 3 putrid at birth; 1 with placenta prævia and profuse hæmorrhage—premature; 1 with prolapsed funis.

"On the whole number of births," says Dr. West, "1013 labors, and 1029 children born, including the series without ergot as well as that with ergot, there were 50 still-births; of which 5 were born dead without any manifest cause. So that, inasmuch as only 1 of those 5 was born under the influence of ergot, that medium having been given in the greater proportion of 1 in 4¾ of the whole number of labors, the author thought there was no sufficient evidence in the facts he had accumulated to justify the doctrine that ergot of rye was dangerous to the life of the child."

We leave Dr. West to speak for himself in the following summary:—

"The author concluded his paper with the observation that the tables before the society appeared to prove that it was immaterial in what stage of the labor the medicine was given; whether the os uteri was rigid or supple; whether the liquor amnii was or was not evacuated; or whether the mother was multiparous or primiparous; but that it was essential that actual labor should be present, as well as that the accoucheur should be competent to meet any emergency that might arise, just the same as when ergot has not been given; that ergot was useful wherever it was desirable to improve uterine action; and that it could be dangerous only where uterine action would be dangerous, as, for example, in a case of arm presentation after the liquor amnii was evacuated, as then it would make turning more difficult."

On the other hand, it will be remembered that Prof. Huston said that in his experience the parturient women subjected to the influence of the drug gave birth to children "stillborn in a proportion shocking" to his feelings. "In the city of Philadelphia, where it is so much praised by many distinguished men, this item in the bills of mortality has become so glaring as to attract the notice of the editor of one of our daily papers." This was in 1829.

From a summary of cases given by Dr. Hardy (*Dublin Journal*, vol. xxvii. p. 224), it appears that in 48 instances where the ergot of rye had been given, 34 children were stillborn.

Dr. Ramsbotham says:—

"After a great number of trials I observed that although the mothers recovered as well as if through an ordinary labor, their systems not being in any sensible degree injuriously affected by the drug, yet that the proportion of children stillborn was greater than when the membranes were punctured. This I attributed to the baneful influence of the medicine upon the fœtus." Dr. Ramsbotham modified his practice in consequence.

"Dr. Trask," says Dr. Robert Barnes (*Lancet*, Nov. 26, 1853), "who analyzed the histories of all the cases he found recorded, found that in a large proportion ergot had been given. It is quite true that in many of these cases the ergot was given in contravention of the rules usually laid down. In some there was obstruction to the labor from distortion of the pelvis, malposition or mal-proportion. But this consideration does not diminish the value of the general fact, that ergot has frequently caused rupture of the uterus. If given before the head has descended into the pelvis, who can determine, even in the case of a well-formed pelvis, that an obstacle will not arise in the unusual or morbid enlargement of the head? If given even when the head is pressing on the perinæum, the os perfectly open, and all those conditions apparently present which are held to justify the resort to ergot, who can tell whether a second or a third child may not be behind? And who would knowingly goad the uterus into spasmodic fury in case of twins? How great is the probability that the second child would be driven into the pelvis in a transverse position?"

Dr. Barnes (*op. cit.*) goes on to say:—

"Drs. Hardy and M'Clintock observed that the pulsations of the fœtal heart underwent a similar diminution in frequency to that witnessed in the mother, and that this was succeeded by irregularity and intermission, and that it became *inaudible*. Dr. Hardy, Dr. Beatty, and others, after careful observation directed to this point, assert, that unless the child be born within a limited interval from the administration of the drug, it will be stillborn. The excessive mortality of the children in ergotic labor is a fact well established, although disputed by some practitioners enthusiastic in the praises of ergot. The Prefect of the Seine had observed an almost regular annual increase in the number of stillborn children, and he was informed that in a large number of these cases ergot of rye had been given during labor. He put the following question to the Academy of Medicine—'What may be the influence of ergot of rye on the lives of infants, and on the maternal life?' The report made by a commission of the Academy, consisting of Orfila, Adelon, Villeneuve, Mérat and Danyau, contained the following conclusion:—'Ergot of rye administered improperly causes death to the fœtus, and injury to the mother.' The immediate source of danger to the fœtus is either the toxical property imparted to the blood, or the interruption to the circulation through the uterus and the placenta, occasioned by the long-continued contraction of the uterus. In this latter case the child may perish from asphyxia. These are the usual sources of danger; but there is a third. The long-continued and violent pressure to which the child is subjected during ergotic labor may compress the brain beyond the limit of endurance, or it may impede the circulation through the umbilical cord."

Dr. Ramsbotham again says:—

"It has happened to me in four different instances to witness the death of the fœtus, a few hours after birth, by convulsions, after the induction of premature labor by ergot."

The theoretical objections to the employment of ergot in parturition, we have nowhere seen more strongly put than by Dr. Meigs in the following passage:—

"A labor is effected by the contractions of the muscular fibres of the womb, aided by that of the abdominal muscles. If all the powers employed in a labor could be accumulated in a single pain, lasting as long as all the natural pains do, no woman probably could escape with life from so great an agony, except that small number who are met with, and whose organs, happily for them, make no resistance, but open spontaneously like a door, to let the fœtus pass out. By a beneficent law of the economy, the pains of labor are short, not lasting more than thirty or forty seconds in general, and returning once in three to six minutes. Under such pains or contractions, however powerful, the fœtus is safe; for as soon as the contraction is over it lies in the womb free from pressure, and the placenta, which during the contraction had been violently compressed betwixt the womb on which it lies and the child within the cavity—that placenta, I say, recovers its circulation, and continues during the absence of the pain to perform all the bronchial offices which belong to it. But," he continues, "if an ergotic pain is produced to last thirty minutes, in a case where the placenta is on the fundus uteri, and to be jammed for thirty minutes against the child's breech without an instant of relaxation, who can doubt that its circulation is either wholly or nearly abolished; and that when the child emerges at last from the mother's womb it will emerge quite dead or in a profound asphyxia from the long suppression of its placental circulation? Multitudes of children are born dead from this very cause, by the imprudent exhibition of a medicine which as certainly excites a spasm of the womb as nux vomica does that of the other muscles of the body. For my own part," he adds, "I could say that I scarcely give ergot as an expulsive agent; I chiefly employ it at the moment of, or just before the birth of the child, in order to secure, if possible, a permanent and good contraction of the womb after labor in women who are known in their preceding labors to have been subject to alarming hæmorrhage."

On the first side of the question again it is urged, first, that the injurious effects ascribed to ergot might have occurred from pressure, even if the drug had not been used; secondly, that they are often owing to its use too early in labor; thirdly, that the delay of tedious parturition may sometimes be more dangerous than interference by the judicious employment of the agent under consideration.

Thus, we have statistics opposed to statistics—theory opposed to theory. Each one must judge or suspend judgment for himself, according as his understanding be convinced or left in doubt. For ourselves we adopt the following maxims:—In contemplating the use of a drug, we should take ground that the "antecedent presumption" is against any interference with nature—a presumption, however, liable to be overthrown on due cause being shown. This presumption is strengthened when we find practitioners whom we know to be careful observers, and of vast experience, opposed to the administration of a drug from close watching of its *behavior* in their hands, both in cases favorable, and in those unfavorable in their termination.

As to the employment of ergot, after or just before, the second stage of labor is completed, for the purpose of controlling hæmorrhage, all, we believe, claim for it great value.

M. Lortet's Ascent of Mont Blanc.—Two ascents of Mont Blanc were performed last summer by Professor Lortet, of Lyons. Before making these ascents he was somewhat incredulous as to the reality of the existence of that disturbance of functions known as *mal des montagnes* or mountain sickness, believing that the imagination had more to do with this effect of rarefied air than travellers chose to admit. Frequently ascending Mount Rosa to the height of 4300 metres without undergoing the slightest inconvenience, he felt sceptical as to the effect of the additional 500 metres. The experience of these ascents has, however, convinced him of the reality of the occurrence. The nausea, breathlessness and somnolence attendant upon this last portion of the ascent left no doubt as to the reality of the suffering produced by the rarefied atmosphere. The summit once reached, all ill effects subsided, except the breathlessness caused by any exertion. One of the party vomited the whole time, and on examination his temperature was found reduced to 32°C. under the tongue, the pulse being rapid and powerless. Leaving aside M. Lortet's graphic description of the ascent, we may cite the principal results of his observations. 1. As regards *respiration*, he found the number increase from 24 at Lyons and Chamonix to 36 at the summit of Mont Blanc, the breathing being very short and oppressed even when quite still, and the slightest movement inducing breathlessness. After two hours' rest these effects gradually diminished, the respiration descending to 25, but always remaining painful. Traces were taken by the anapnograph, and from these it appears that the quantity of air inspired and expired on the summit is much less, and the duration of the inspiration as compared with that of the expiration is much shorter. The quantity of air inspired is very small, and as this is submitted to a very low pressure, the amount of oxygen brought in a given time in contact with the blood is necessarily very small. 2. *Circulation.* Although the ascent was performed very slowly, the pulse rose in an extraordinary manner, mounting up progressively from 64 to 136, and at the final effort to 160. The vessel seemed almost empty of blood, the slightest pressure arresting its course. During the last 300 metres the veins of the hands, arms and temples were distended, the face being pale and somewhat cyanosed. All the party, including the guides, experienced the heaviness and somnolence, often very oppressive, due probably to a stasis of venous blood in the brain or to defective oxygenation. After two hours' rest at the summit, the pulse still continued to beat between 90 and 108. Numerous sphygmographic traces are given, not only exhibiting the conditions of the pulse in M. Lortet's person, but also in that of Cupelain, one of the most experienced of Alpine guides. Although in him the *mal des montagnes* exhibits itself by no remarkable symptoms, the sphygmograph indicates that he nevertheless is subjected to functional disturbances. The sphygmograph applied under these circumstances exhibits curves having an exact resemblance with those termed by M. Marey "*courbes d'algidité.*" The pulse is so wretchedly small that the spring of the instrument is scarcely raised. This alone would indicate a general cooling of the body, the reality of which diminution of temperature has otherwise been shown. 3. *Temperature.* This was carefully taken at various altitudes by placing a Walferdin thermometer under the tongue. *While walking* the diminution of temperature was very remarkable, and proportioned to the altitude attained. M. Lortet's temperature, from being 36·3°C. at Chamonix, descended gradually as he mounted up, until at the summit it had become as low as 32°. When in a state of immobility, however, it remained at 36°, as at Chamonix. During the muscular effort necessary for climbing the temperature may descend by 4° or even 6°C., which is an enormous descent; but after a few minutes' rest it regains nearly its normal point. At the summit as long as half an hour is required before the readjustment takes place. Since his return to Lyons, M. Lortet has found that the rapid ascent of the moderate hill which overhangs that town suffices to raise the temperature from three-tenths to seven-tenths of a degree. These observations apply, however, only to climbing while *fasting*, for, notwithstanding the efforts required if these be performed during the digestive process, not only will the 36° be maintained, but a rise to 37·3 may be noted. About an hour after the meal the body again loses its temperature under muscular effort. The chilling M. Lortet explains by the large amount of caloric which under the efforts incident to climbing is transformed into muscular force—an amount which the economy is only just able to furnish. Although the body may be burning, and covered with sweat under the exertion of mounting, it yet loses heat, and frequent halts are necessary for the regeneration of this. It is, in fact, but another exemplification of the law developed by Meyer, Joule, and Tyndall, that heat and motion are but different modes of action of the same force. M. Lortet suggests that this loss of heat ceases during digestion, probably on account of the acceleration of the general and capillary circulation, and also from the extreme rapidity of the absorption of the aliment. This explains the custom of the guides insisting upon eating about every two hours, but unfortunately, after 4500 metres have been attained, the loss of appetite becomes so great that even a few mouthfuls are swallowed with difficulty.—*Medical Times and Gazette.*

Notes on some Cases of Erysipelas. By John W. Martin, M.D., M.Ch.—In the following remarks, I merely wish to record the observation of a few points which, I think, are possessed of some interest.

During the last eight months, three well-marked cases of erysipelas of the head and face have come under my notice, the subjects being all persons in the poorer ranks of life, two of them women, and one a young man.

Case I.—Mary K., æt. 45, wife of a laborer; the attack commencing six weeks subsequent to her confinement.

Case II.—Mary M., æt. 35, wife of a factory laborer, and mother of nine children. Has always been delicate, and during the three months preceding the attack had to give up work.

Case III.—Maurice D., æt. 22, factory operative; unmarried.

In *all*, the form of attack was phlyctenoid; there was a period of *latency* for a week before the appearance of the eruption, as marked by languor and a general feeling of "*malaise*," and the attack itself set in with the usual symptoms of nausea, vomiting, pain in the back, loaded tongue, quick pulse, and confined bowels. In all, the glandulæ concatenatæ were painfully swollen and tender, accompanied by a feeling of stiffness in the neck.

The most careful inquiry into the cases of the two women could elicit *no history of lesion of any kind* from whence the attack might have had its starting point, thus forming exceptions to what Trousseau, in his excellent chapter on erysipelas, states to be almost universally the rule.

In the case of Maurice D., there was sore throat accompanying, but not, as far as I could learn, preceding the attack; but there was *no lesion* in the neighborhood of the brow, eye, cheek or ear, where the blush first exhibited itself.

In each of the cases the climax, as shown by thermometrical observations, was reached at periods varying from the sixth to the eighth day, the highest temperature varying from 101 one-fifth degs. to 101 three-fifth degs.

In *all*, at the point where convalescence was becoming thoroughly established, there was a fall in the temperature several degrees below normal, varying from 94 one-fifth degs. to 97 four-fifth degs., the most careful observations being made to establish these temperatures.

A similar fall in temperature, before the establishment of convalescence in febrile disease, has been observed and recorded in some thermometrical observations made by my father during an epidemic of typhus fever that occurred in Portlaw in the winter of 1866, and the spring and summer of 1867.

In *all*, chemical examination of the urine showed *the presence of sugar*; in the case of Mary M., the test for uric acid was followed immediately by a copious precipitate, its presence being confirmed by the microscope. I am sorry to add that I omitted this test in the other two cases.

The treatment in all cases consisted in dusting the part affected well with flour, the exhibition of mild aperient medicine, of muriate tr. of iron and wine ℥iv. daily, the patients being given as generous a diet as possible.

The points of interest seem to me to be:—

1st. Is there a true period of latency culminating in the febrile symptoms usually preceding the eruption? or, are the febrile symptoms dependent on the engorgement, tenderness and accompanying constitutional disturbance set up in the neighboring glands, by the presence of a lesion of some kind or other, from whence, according to Trousseau, the eruption takes its starting point?

2d. Is there in all febrile diseases, *as a rule*, a fall in temperature below normal before convalescence is established?

3d. Is sugar usually present in the urine of erysipelatous cases?—*Dublin Medical Press and Circular.*

Monstrosity—Unprecedented Presentation.—From a paper read before the Nashville Medical Society, by Wm. B. Maney, M.D., and published in the *Nashville Journal of Medicine and Surgery*, we make the following extract:—

On the 26th of August, between one and two hours after noon, I was called in haste to see Mrs. J., a stout, healthy Irish lady, aged 28, the mother of five children, three of whom are now alive.

On entering the room, I found the patient and female attendant very much frightened at a considerable hæmorrhage that had occurred a short time previous. The midwife informed me that she had been in attendance on Mrs. J. since about ten o'clock, P.M., of the 25th; that the pains had been slow and feeble; that about an hour before my arrival the waters had broken, and were followed immediately by considerable flooding; that being unable to detect any portion of the child after the evacuation of the waters, she had sent for me.

Upon inquiry of my patient, I was informed that all her previous labors were very slow and tedious, but she was delivered without the intervention of instruments, and without any serious consequences, or any inconvenience save the great length of the labors.

Upon examination, I could plainly detect the occiput in the left acetabulum, with the right hand resting on the left side of the head, some distance above the ear. The parts were in a favorable condition, nor could I detect any cause for the hæmorrhage that had so frightened my patient and her attendant.

Seeing no reason why the labor should not soon be terminated, save the slowness and feebleness of the pulse, I ordered wine of ergot ℥ij., and administered it in tablespoonful doses, at intervals of fifteen minutes, at the same time trying to assist the action of the medicine by irritating the womb with my fingers. Soon after taking the third dose of ergot, my patient had quite a hard bearing-down pain, followed almost immediately by quite a gush of blood, sufficient to cause her to faint. On her revival, the ergot was given freely, the pains increasing in frequency, but with little increase of force. The flooding, however, ceased; nor was there any more hæmorrhage during the labor.

On a second examination, I found the same state of affairs as at first, save the hand had retrograded a little, and the head had somewhat advanced. The ergot was continued, and on again making an examination, I was greatly surprised to find the hand protruded, and the head nowhere to be found in reach of my finger. Being unable to replace the hand, my next resource was to turn the child and bring the feet down; and as my patient complained of great pain and soreness of the womb, I ordered ether ℥vi., and administered it freely, with a most happy effect.

While fully under the influence of the ether, I passed my hand within the womb, and fortunately found the feet but little above the mouth. Taking them both within my hand, I endeavored to bring them down, but with all the force I could bring to bear, I could move them but little. The slight movement, however, enabled me to replace the hand, and now having the feet presenting, I determined to leave the rest to nature.

At the expiration of probably nearly an hour, I again made an examination, and was astonished to find the feet, head and one hand within the superior strait; the feet behind the pubis, the hand between the feet and head—the latter crowding both feet and hand into the cavity of the pelvis.

Seeing that instruments would be necessary to end the labor, I sent a note to Dr. Briggs, requesting his attendance, and then sat patiently to work, endeavoring at each successive pain to push up the feet and hand and give the head a chance. The hand was replaced with much difficulty, but little or no progress could be made with the feet. About dark Dr. Briggs arrived, and I informed him of the state of affairs.

Upon examination, Dr. Briggs found the presentation as last described, save the hand had again come down. After something over an hour's work, the head was sufficiently cleared to introduce the forceps, and Dr. Briggs delivered the head with but little trouble or delay. Laying aside the instruments, he finished the delivery of one of the most singular freaks of nature that I have ever witnessed. The head, arms and chest were well formed, and of natural size. The abdomen was void of skin and muscle, and covered by the peritoneum alone. The inferior extremities—of good size and well proportioned except the left, ending in a club foot—started out a short distance below the superior extremities, and in place of the buttocks was a dark colored tumor, somewhat larger than the head—to which the cord was attached. Neither genital organs nor anus could be discovered.

Compound Fracture of the Patella—Recovery. By J. P. Aldridge, M.D., F.R.C.S.—On Christmas morning last I was called to a woman, aged 53, who had sustained a severe injury. On arriving, I found a transverse fracture of the patella, with a wound laying open the cavity of the knee-joint, and extending round the knee on either side as far as the outer and inner boundaries of the popliteal space. The leg lay in a flexed position, exposing the cavity of the joint, but the lateral ligaments were not ruptured. Part of the fractured patella protruded through the wound; there was considerable hæmorrhage, but not requiring the tying or acupressing of any vessel. I may here mention that the patient had inflammation of the joint, with deep-seated abscesses in the thigh, some years before, which resulted in partial stiffening of joint.

On the morning above named she was proceeding upstairs in the dark, and fell stumbling down two steps, her leg doubling under her. She states her knee struck on one of the steps, which caused the mischief; but probably the violent doubling of the leg caused the contracted muscles of the thigh to bear violently upon the patella, the ligamentum patellæ resisted, and the bone gave way. Be that as it may, the injury was severe, and one requiring no small consideration. After careful examination, I resolved to try and save the limb, so, with the aid of my assistant, Dr. F. W. Smith, replaced the parts into their proper position, and brought the edges of the wound together by means of silk sutures and adhesive plaster. The parts were most accurately and carefully adjusted, a few turns of a bandage placed around the thigh to prevent muscular contraction, as also over the calf of the leg. I laid the knee in a pillow-splint, raising the leg a little. At noon the same day found her very restless, and administered an anodyne, which soon composed her, and she expressed herself easy, and slept several hours

26th.—Still quiet; no fever; pulse 79.

27th.—Slight constitutional disturbance; pulse 84.

28th.—More composed; had a good night.

29th.—Removed sutures and applied more strapping; found the whole extent of wound united by first intention, and skin natural and cool. Left the knee exposed to the air and covered lightly with a fold of blanket placed over a cradle.

Since then, recovery has been most complete, and without the slightest constitutional disturbance, free from pain, and enjoying good rest; to use her own words, "I have been quite easy, Sir, ever since you took out the threads."

A month after the accident the patient could sit up, and in six weeks, with some assistance, walked into another room.—*Medical Times and Gazette.*

Boston Lunatic Asylum.—(From Mayor Shurtleff's Inaugural Address, Jan. 3, 1870.) During the past year alterations have been made to add temporarily to the security, safety and comfort of the inmates of the Lunatic Hospital, and to give accommodations to the continually increasing number of patients. Nevertheless, the hospital remains in the same crowded condition in which it has been for the last few years, the number of the patients being more than two hundred; and in several of the rooms ten or twelve persons are huddled together, to the great injury of health, and with a risk of personal harm to the inmates, notwithstanding the good and constant watch that is kept over them by the kind and careful attendants. This disgraceful state of things can never be satisfactorily overcome until suitable provision is made for these unfortunate beings by the erection of a proper building, wherein they can be humanely taken care of, in a manner that will comport with the notions of the city in all its matters relating to the care and management of its eleemosynary institutions."

His Honor does not tell us how crowded the present Lunatic Hospital would be if it contained no patients but those who had their domicil in Boston. It would be interesting to know this, because there is a discrepancy between the Mayor's statement as to "this disgraceful state of things," and that of Mr. George B. Emerson in a late communication to the *Advertiser*.

Again, if a new building be indeed required, does His Honor really mean to say that the insane poor cannot be humanely taken care of in a building erected by the

State of Massachusetts; and to imply that "the notions of the city in all its matters relating to the care and management of its eleemosynary institutions" are vastly superior to the *notions* of the Board of State charities? We entertain some curiosity on this point *for a special reason*.

The Winthrop Hospital project lies stranded on a point of order. The *Advertiser* says, "After a spirited discussion of an hour or more, it was discovered that the plans and estimates were not before the Council, and the matter was suffered to drop. After the crushing reasons which were brought against it, there is small chance that it will rise again."

Our thanks are due to Messrs. Appleton & Co. for a copy of the finely executed steel engraving of the late Dr. John W. Francis, which they publish and dedicate to the medical profession of the United States.

The Surgeon-General of the Commonwealth.—In this paper, designed to call attention to an enterprise which shall give us means to aid our sick and wounded comrades, it is eminently appropriate that we should remember one, who in time of war contributed so largely to the honor of our State, and to the efficiency of our troops in the field. We refer to Surgeon-General William J. Dale.

From the beginning, through the long, gloomy months of the rebellion to its glorious end, no officer was called upon to perform more varied and trying duties. In selecting regimental medical officers, in hurrying to the field additional assistance, after our great battles, in facilitating the furlough and discharge of the sick and wounded, in answering the importunate calls for information after each action—he displayed that rare combination of judgment and decision, which gained for Massachusetts the deserved reputation of excelling all other States in interest and care for her sick and wounded.

At the close of the war, when the State made provision for the relief of those disabled in service, and for the families of our dead comrades, he gave to the difficult questions submitted to his decision, the same earnest attention and ripe judgment which characterized him during the war. While he had no mercy for the skulk and impostor, the really deserving found in him a help and a friend. For the clear-headed, warm-hearted old General, the soldiers of Massachusetts will always entertain feelings of profound respect and friendship.—*Dress Parade*.

Death of a Respected Physician.—Dr. Thomas R. Boutelle, one of the oldest and most esteemed physicians of the State, died at his residence in Fitchburg, July 13th, 1869, after a long illness. Dr. Boutelle was born in that town June 9th, 1795. He received a liberal education, studying medicine with Dr. Peter Snow, father of the present physician of that name, and receiving his medical degree from the Yale Medical School. He first practised medicine in New Braintree for some years, and afterwards removed to Leominster, and from thence to Fitchburg, where he continued the practice of his profession up to the time of his last sickness, a period of over thirty-six years, being at that time the oldest practising physician of the town. In his profession, Dr. Boutelle took high rank as a careful and conscientious physician. As a man and a citizen he was most highly esteemed and respected by his fellow-citizens, for his perfect integrity and uprightness of character. Always a firm supporter of every cause of benevolence or freedom, he gave liberally of his means for their support, and his death will be widely mourned.

DEATHS FROM CHLOROFORM.

Aug. 22d, a boy, aged 12, with a dislocated hip, inhaled chloroform from a handkerchief, twenty or thirty drops at a time. "The operators had been pulling at the ropes when it was noticed that the pulse was failing and the boy died immediately. He had been under the influence of the chloroform about twenty minutes, and two drachms had been given."—*Druggist*.

New York, Nov. 1, 1869.

My Dear Doctor:—I am informed, on reliable testimony, that a woman died from the administration of chloroform on the 26th or 27th of October last, at Cora, Crawford County, Pennsylvania. She had taken chloroform, administered by a dentist, to have some teeth extracted. As it is doubtful if this case will be given to the public, and as I know you are seeking light on this subject, I send the facts to you as I have received them. I know nothing more of the case, not even the names of the parties.

Very truly yours, Frank H. Hamilton.

G. S. Dunster, M.D.

New York Medical Journal.

Medical Miscellany.

LADY DOCTORS.

O doctors grave of Saville Row,
You'll need your boasted knowledge;
The girls are coming up, you know,
To pass the Hall and College.
Oh! M.R.C.S., or M.D.,
Your glory now *sic transit*,
And there's a howl of agony,
Reëchoes from the Lancet.

How strange to hear from woman's lips
That queer prescription Latin,
To think diseases should eclipse
Her love of silks and satin!
She'll have all mortal ailments pat,
Diphtheria, agues quartan,
Prescribe in Mother Hubbard hat,
And cross-cut frills of tartan.

And when a suitor's ardor burns,
She'll know when bending o'er him,
The "Sterno-cleido-mastoid" turns
With good effect before him;
But fatal to a lover's bliss
Such anatomic lore is,
When girls can pout to meet a kiss,
"Orbicularis oris."

Ah, me! a patient's cheek would glow,
Whene'er a soft white finger,
Upon his pulse's ebb and flow
In doubt should chance to linger.
And when the Doctor did depart,
That medical deceiver
Would leave within the patient's heart,
Love's intermittent fever.

And when the fated hour has come—
From which the Saints defend us—
And we're obliged to stay at home,
With "Haustus stat: sumendus,"
There's one thing may console a sage,
When that last journey's certain—
A fair hand leads us off the stage,
And drops the final curtain.

O husbands! ye who love your wives,
And prize domestic blisses,
A source of sorrow all your lives
A Surgeon-wife like this is;
You hear the night-bell's clanging sound,
It tells some patient worse is,
I own you have a decent ground
For truly British curses.

O maidens! there is work to do,
A duty still diviner
Than healing must devolve on you,
Whose clay God fashioned finer.
However well you play your parts,
The Surgeon's skill revealing,
You'll learn in soothing aching hearts
A truer task of healing! [*Eng. Exchange.*

A New Publication.—The first number of the *American Journal of Syphilography and Dermatology* has come to hand. It is edited by W. H. Henry, M.D., &c. &c., and makes a fine appearance. Publishers, F. W. Christern, N. Y., and Lindsay and Blakiston, Philadelphia.

Nearly Swallowed her Teeth.—A middle-aged lady in Detroit was suddenly seized with a vertigo and fell to the sidewalk. A physician found that she was being strangled in some manner. Investigation revealed the cause in the shape of a set of false teeth that had dropped from their position as the head of the lady thumped on the sidewalk, and in her gaspings for breath had been drawn into the throat so far that she was with difficulty relieved.—*Canada Journal of Dental Science.*

What becomes of Old Shoes.—They are cut up in small pieces, and these are put for a couple of days in chloride of sulphur, the effect of which is to make the leather very hard and brittle. When this is found to have been effected, the material is withdrawn from the action of the chloride of sulphur, washed with water, dried, ground to powder, and mixed with some substance which causes it to adhere together, for instance shellac or any other resinous material, or also good glue or thick solution of gum; it is then pressed into moulds and shaped into combs, buttons, knife-hafts, &c.—*Cosmos.*

To Correspondents.—Communications accepted:—Case of Triplets—Case of Tetanus—Case of Suspected Poisoning by Oxalic Acid.

Books and Pamphlets Received.—Forty-third Annual Report of the Officers of the Vermont Asylum for the Insane. August, 1869. Pp. 16.—Vick's Illustrated Catalogue and Floral Guide for 1870. Rochester, N. Y. Pp. 84.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending Jan. 1, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases	
		Consumption.	Pneumonia.
Boston	106	21	9
Charlestown	11	2	0
Worcester . .	13	4	0
Lowell	16	1	2
Milford . . .	1	0	0
Chelsea . . .	8	0	1
Cambridge .	9	2	0
Salem	11	2	0
Lawrence . . .	7	1	0
New Bedford	17	5	1
Springfield .	9	4	1
Pittsfield . .	1	0	1
Fitchburg . .	5	1	2
Taunton . .	11	2	0
Newburyport	8	4	1
Fall River .	7	3	0
Haverhill . .	1	1	0
	241	53	18

Five deaths from measles, five from whooping cough, five from typhoid fever and six from scarlet fever are reported from all the above cities and towns.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending January 1, 1870, 106. Males, 58—Females, 48.—Abscess, 1—accident, 4—anæmia, 1—apoplexy, 3—disease of the brain, 4—inflammation of the brain, 2—bronchitis, 3—cancer, 1—consumption, 21—convulsions, 3—croup, 1—diarrhœa, 1—dropsy of the brain, 5—drowned, 1—epilepsy, 1—erysipelas, 1—scarlet fever, 3—typhoid fever, 1—gangrene, 1—disease of the heart, 5—homicide, 1—infantile disease, 3—intemperance, 2—disease of the kidneys, 2—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 9—paralysis, 3—peritonitis, 1—premature birth, 3—puerperal disease, 2—purpura hæmorrhagica, 1—rheumatism, 3—scalded, 1—scrofula, 1—smallpox, 1—disease of the stomach, 1—teething, 1—unknown, 3—whooping cough, 1.

Under 5 years of age, 31—between 5 and 20 years, 13—between 20 and 40 years, 23—between 40 and 60 years, 23—above 60 years, 16. Born in the United States, 72—Ireland, 23—other places, 11.

THE

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Original Communications.

CASE OF POISONING FROM CYANIDE OF POTASSIUM. DEATH. AUTOPSY. REMARKS UPON OTHER CASES, &c.

Read before the Boston Society for Medical Improvement, December 13th, 1869, by Dr. Alfred L. Haskins.

About 10½ o'clock Thursday evening, December 9th, 1869, I was hastily summoned to visit a man in Lagrange Street, who, while intoxicated, was supposed to have fallen down stairs and broken his neck, or to have been prostrated suddenly by some internal disease. Upon my arrival at the house I found him lying upon a lounge. The eyelids were partially closed. The eyes presented a glistening aspect. The pupils of both eyes were considerably and equally dilated. His mouth was open; within was found a large cud of tobacco. Upon the right side of the forehead there was a slight abrasion of the skin. The extremities were cool. The limbs were easily flexed, and the mouth was closed without difficulty. Respiration had ceased, the pulse could not be felt, and the pulsations of the heart could not be heard.

The cold douche, artificial respiration and violent shaking of the body were employed, but all attempts to arouse him were fruitless. The following history was learned concerning him:—

He was a married man, aged 33 years, and generally in good health, but for years he had been addicted to the free use of alcoholic drinks. He was an artist in a photographic establishment. For two weeks he had not followed his occupation, but had been "on a spree." During the day of Thursday he had indulged very freely. At 6½, P.M., he ate a hearty supper. At about 8½, P.M., he went out, and in three-fourths of an hour returned so intoxicated that he could scarcely walk. He sat for a while in his room. His wife was reading, and paid but little attention to his movements. She observed, however, that he took a package from his vest pocket and, unfolding it, took in his hand a white substance which she supposed to be confectionery, as he was frequently in the habit of bringing confectionery to her. He soon arose and informed his wife that he was going to the water-closet. In about twenty minutes she heard him ascending the stairs which lead to the basement. She heard him walk through the front entry and ascend a few of the front stairs. She noticed nothing peculiar in his step, but his breathing was panting. This did not particularly attract her attention, as she had frequently heard him pant in the same way while ascending stairs. When he was about half way up she heard a fall. From her room, which was on the second story, she ran down the stairs, but, there being no light in the hall, she could see nothing. On reaching the foot of the stairs, she found him lying upon the stairs with his head resting upon the hall floor. As no assistance was immediately available, four or five minutes elapsed before he could be carried to his room. Just as two gentlemen came to remove him he was heard to make a noise, as if attempting to vomit. No other sound was afterwards heard, nor any movement of the body observed.

To my question, whether any medicine had been taken, a negative answer was given. An investigation of the localities which he had last visited revealed the following:—Upon a table in the basement a goblet was found, in which were about six drachms of a transparent liquid. At the bottom of the goblet were four or five small, hard, white, irregularly shaped masses. As the substance which was dissolved in the liquid had been deposited upon the sides of the goblet, the quantity of fluid which the goblet had contained could be distinctly seen. It was seven or eight ounces. The same substance had been deposited upon the side of the goblet from which the liquid had been poured in drinking. Upon the inner side of the goblet, and near the brim, was a small piece of tobacco. The tablecloth, near where the goblet stood, was stained with the coloring matter of tobacco. The floor, beneath that portion of the table where the goblet was placed, was wet with melted snow, which had evidently come from a pair of boots. There were found also upon the floor three or four matches which had been used, and a piece of paper which corresponded to the piece which had contained the supposed confectionery.

The goblet with its contents, which, from the appearance of the white masses and the odor of peach which was thought to be exhaled, was considered to be cyanide of potassium, was taken to the office of Dr. John Homans,. where the substance was subjected to a hasty analysis.

A piece of the solid mass applied to the tongue caused a sensation of pungency and coolness. The reaction of the liquid was alkaline. A solution of nitrate of silver dropped into a portion of the liquid produced a dense white precipitate of cyanide of silver, and left the supernatant liquid clear. The precipitate was wholly dissolved by the addition of ammonia. Muriatic acid being added to some of the liquid, hydrocyanic acid was evolved. The liquid exercised a remarkable bleaching power upon the tincture of iodine and a solution of the ammonio-sulphate of copper. A solution of sulphate of iron added to a portion of the liquid, and followed by dilute hydrochloric acid, produced the beautiful color of Prussian blue (ferrocyanide of iron).

Autopsy.—At the autopsy, made sixteen hours after death, I was kindly assisted by Dr. J. F. Appell.

The skin presented a pale aspect. Rigor mortis very marked. It was with the greatest difficulty that the limbs could be in the least flexed or extended. The mouth was firmly closed. Upon the right side of the forehead there was an abrasion of the skin about an inch square. The pupils were considerably dilated. The muscles of the chest and abdomen were of a dark red color. The lungs were somewhat congested, especially at their posterior aspect. The mucous membrane of the bronchi was quite red. There was about a drachm of clear serum in the pericardium. The heart was quite small. The left side of the heart was firmly contracted and contained but little blood. The right side of the heart was filled with dark colored, fluid blood. The walls of the heart were of normal thickness. With the exception of one small coagulum in each cavity of the heart, no coagula were anywhere found. From every cut vein there was a profuse flow of blood. The mucous membrane of the œsophagus was of a deep red color. The entire mucous membrane of the stomach was of an intensely crimson color. Dotted over the surface were small elevations of the same red appearance. There was no thickening or ulceration of the mucous membrane. The membrane was covered with a considerable coat of viscid mucus. The stomach contained about ten ounces of a thick fluid composed of partially digested food, mucus and some blood. The duodenum and a portion of the jejunum presented the same crimson appearance as the stomach. The remainder of the small intestines and the large intestines presented nothing abnormal. The pancreas was healthy. The spleen and kidneys were much congested. The substance of the liver was more red than normal. Its serous coat was very red. The bladder was empty and firmly contracted.

The brain and spinal cord, owing to the objection of friends, was not examined.

An examination of the contents of the stomach by various tests, revealed the presence of hydrocyanic acid. The characteristic odor of hydrocyanic acid was clearly distinguished. The presence of hydrocyanic acid was detected in the blood. A microscopical examination of the blood presented nothing abnormal in the appearance of the corpuscles.

The symptoms in the above case are, unfortunately, almost wholly wanting. The privy, which the deceased expressed his intention of visiting, was situated outside of the building, and to reach which he must have passed through considerable snow. From the fact that melted snow was found upon the floor beneath the table where the goblet stood, and also from the fact that at the autopsy the bladder was found completely empty, it is probable that he first visited the privy. After taking the fatal dose he walked through a kitchen, across a short entry, ascended a flight of stairs, passed through another entry and had partly ascended a second flight of stairs before he fell. One minute at least must have been occupied in passing this distance. Five minutes probably elapsed before assistance came, when he was heard to make a noise as if attempting to vomit. From the time that he drank the liquid till death took place, an interval of ten minutes *may* have elapsed. The quantity of the liquid which he drank was six or seven ounces, and, as quite a thick film of the salt was deposited on the sides of the goblet, it is probable that the solution was quite strong.

The necroscopic appearances of the different organs of the body were those which are most frequently found in cases of poisoning from cyanide of potassium or hydrocyanic acid—viz., rigidity of the muscles, dilatation of the pupils, venous engorgement, fluidity and dark color of the blood, contraction of the left side of the heart and fulness of the right side, and intense congestion of the œsophagus, stomach, small intestines, spleen and kidneys.

This, we believe, is the only case of death from cyanide of potassium reported in this vicinity, in which a *post-mortem* examination was made. In vol. lvi. of this Journal, in the Reports of the Boston Society for Medical Improvement, a case of fatal poisoning from cyanide of potassium is reported by Dr. C. E. Ware. In this case a teaspoonful of a solution, containing seven grains of the cyanide to a drachm of water, was given by mistake. Almost immediately there was a severe burning sensation in the stomach, and a call to stool. The patient began to sink directly and became unconscious. Death took place in less than an hour. There were no convulsions, but a sudden convulsive movement of the body about ten minutes after the heart had ceased to beat. There was no autopsy. In vol. lxxiv. of this Journal, Dr. J. C. Warren gives a case of poisoning from this drug. A porter in a machine shop, two hours after a hearty meal, feeling thirsty, dipped a cup into a jar of liquid which he supposed to be drinking water, and drank about three drachms before he discovered his mistake. About twenty-three grains of the cyanide of potassium were swallowed. Two minutes afterwards he became senseless. About thirty-five minutes after swallowing the draught he came under Dr. Warren's observation. He was then insensible. Respiration was slow and labored. The eyes were open and fixed. The pupils were dilated. The veins of the face and neck were very prominent. The pulse was full, regular and rapid. The stomach was thoroughly washed out with warm water by means of the stomach pump. A solution of ammonia was afterwards injected into the stomach. During this operation there were convulsive movements of the extremities, followed by rigidity. There was some tendency to opisthotonos. The paroxysm continued about a minute. The patient soon began to revive, and in a few hours was completely restored. In the same volume of the Journal, another case is mentioned by Dr. J. C. White in some editorial remarks headed "Poison on Draught." A stranger in Boston, being thirsty, entered a jeweller's shop and asked for water. He was directed to the rear, where seeing a large jar such as is used for holding ice-water, he lifted the cover and drank about half an ounce of the liquid, which contained about half a drachm of the cyanide of potassium. He became insensible in five minutes, and died in half an hour. There was no autopsy. The remarkable escape from death in the former case, and the prolongation of life in the latter case, were probably owing to the fact that the stomach was filled with food. A dose of five grains has proved fatal in twenty minutes. The medicinal dose is one-eighth of a grain.

The extensive use of cyanide of potassium in the arts affords abundant opportunity for mistaken or intentional poisoning, and it behooves physicians not to assume that every sudden death, which takes place in the community, is a case of heart disease or apoplexy. So available is the cyanide of potassium, and so sudden and quiet is it in its action, that, in Europe especially, it is becoming the fashionable drug which the suicide and the poisoner employ, who wish to do their work surely and quickly.

OPIUM EATING CURED BY BELLADONNA POISONING.

Reported by E. M. Webster, M.D., Kingsville, Ohio.

Mrs. C., aged 36 years, was admitted into the Ashtabula County Infirmary, April 22d, 1869:—Disease, opium eating of eight years' duration.

Apr. 23d, 1869, gave to nurse half an ounce of fluid extract of belladonna, and directed her to give the patient ten minims every eight hours for twenty-four hours. At two o'clock, P.M., was requested to see patient, who was supposed to be dying.

Found her in a lethargic state, pulse and respiration nearly normal;[*] muscular system so extremely relaxed as to render deglutition very difficult.

Ascertained that four hours after taking prescribed dose (while nurse's back was turned), patient swallowed one half the contents of the phial (ʒij.), which fact was not discovered until the effects of the poison were noticed. Two and a half hours had elapsed since taking the poisonous dose, when I found her in the condition above stated.

The stomach responded feebly to sulph. zinc and mustard seed. Only what was administered was ejected, and that only when lying on the face. Each effort to vomit was followed by slight tetanic spasm, to which there appeared a persistent tendency. I then tried friction with capsicum and aqua ammonia along the spine, and one grain of the sulph. of morphia internally. Three o'clock, tetanic symptoms subsiding; muscular relaxation as before; retching with some subsultus; pulse weak and unsteady. Ordered one grain of morphia in whiskey.

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[*] Italics are ours.—Ed.

3.30 o'clock; less relaxation, moves her arms and picks at the bedding. Gave her another grain of morphine in whiskey.

4 o'clock; makes some effort to answer questions, but no intelligible answer obtained. 4.30 o'clock; answers rationally at times, and is gradually improving. She took nothing but milk and coffee, prefering it to food for five or six days; during that time, the pupils remained dilated, and the skin moist and clammy.

On the 20th of May she was discharged as cured of the habit of opium eating. On recovering from the effects of the belladonna she had none of the distress complained of by opium eaters after being deprived of that drug. Her own words were, "I should not think of opium or morphine unless spoken to about them."

Sept. 16th.—Her husband writes, "Mrs. C. is as free from the habit or influence of opium as ever she was or any other person is, and she has gained twenty-five pounds since she came home. The greatest quantity of morphine taken in eight days was three drachms." Her friends had reduced it to half an ounce of opium each week, but were unable to limit it farther when she was received into the Infirmary. She was not herself, so much was the suffering for want of more of the drug, until after taking the belladonna.

Selected Papers.

THEORETICAL AND PRACTICAL MIDWIFERY.*

[We take this synopsis from the *British and Foreign Medico-Chirurgical Review*, because of the great amount of condensed instruction it contains.—Ed. B. M. & S. Jour.]

After ten years' interval we again bring to notice the most complete treatise of the day on midwifery. The seventh edition of Cazeaux, revised and annotated by M. S. Tarnier, is the fifth translated edition of Dr. Bullock. The work is, of course, well known to writers on obstetrics, but we think it ought to be placed in every hospital library within the reach of the student.

M. Tarnier has fairly accomplished his task of bringing the original work up to the present time, and without altering the felicitous style of Cazeaux he has, by retouching the text where necessary, given a new direction and meaning to the original ideas.

Some alteration has been made in the plan of the old edition, and M. Tarnier has availed himself of recent researches as to the structure of the uterus and ovary. Thus he refers to M. Rouget's memoir, and describes the erectile tissue of the uterus, the muscular layers in the broad ligament, and in the stroma of the ovary. Following M. Sappey he tells us that—

"The ovary is composed of a central portion and of a superficial, which he calls the ovigenic layer, and which alone contains Graafian vesicles. These M. Sappey calculates are over 300,000 in each ovary, making near 700,000 for the individual. If, therefore, all the ova existing in the surface of the ovaries of a young woman were to be fecundated and undergo all their phases of development, it would require but two women to furnish inhabitants for a capital like Paris, containing 1,600,000 souls. * * * There are as many ovisacs in the fœtus as there will be at puberty."

In the description of the chorion, M. Robin's essay in *Le Journal de Physiologie*, 1861, is largely made use of; and his views regarding the placenta are also given in detail.

Three theories are offered as to the cause of the position of the fœtus in uterô—the oldest, viz., that of gravitation, has been lately reasserted with additional evidence by Dr. Duncan. M. Dubois's theory is that—

"The vertex presentation is a consequence of the instinctive will of the fœtus itself; and Cazeaux suggests that, as the uterus being developed during the first six months at the expense of its fundus is spread out superiorly, but, on the contrary, is much contracted below, it is evident that the pelvic extremity which from the folded condition of the lower limbs is much more voluminous than the head, must naturally lie in the largest cavity, that is, toward the fundus, and consequently that the cranium will descend to the cervix. There can be no doubt that the inferior part spreads out in the last three months nearly as much as the fundus, but then the fœtal vertical diameter is too long to permit it to traverse the transverse diameter of the uterus, and hence, with some few exceptions, the child is forcibly retained in the position it first assumed."

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* Theoretical and Practical Midwifery. By P. Cazeaux. Revised and annotated by S. Tarnier. Fifth American from the seventh French Edition, by Wm. R. Bullock, M.D. Pp. 1124.

M. Tarnier has added to the chapters on the mechanism of labor a brief review of M. Pajot's teachings on the subject.

"The head and body of the fœtus form two masses, the long diameters of which have opposite directions, from before backwards for the head, and transverse for the body. These two diameters are at right angles to each other; whence it happens that when one of the two parts has a direction adapted to its ready exit from the pelvis the other will have an opposite direction.

"We have thus to describe six stages in the delivery :—

"1st stage	. Compression	of the first fœtal part.
2d "	. Engagement	
3d "	. Rotation	
4th "	. Disengagement	of the second fœtal part."
5th "	. Rotation	
6th "	. Expulsion	

In the treatment of the secundines, the directions are to draw gently on the cord, and wait for an hour or so after the child has passed before taking them away; and no allusion is made to the method much advocated at present in England of taking away the secundines a few minutes after the child, waiting only long enough for the uterus to rest and again contract, and, if needful, introducing the hand while all the soft parts are relaxed. A chapter is added by M. Tarnier on hydatids of the uterus chiefly drawn from Dr. Cayla's thesis. The effect on the fœtus depends on the amount of disease in the chorion. Should all the villi become dropsical, the death of the fœtus would necessarily ensue, and occurring at a period very near that of conception, it might undergo solution in the amniotic fluid and thus disappear. Should the alteration be more recent or less complete, we should have an embryonic mole in which the body of the fœtus would present various grades of development. Most writers who have noticed the subject hold similar views as to the pathology of this condition of the ovum. Dr. Farre says—

"It is almost needless to observe that the presence of a true chorion structure, which these substances invariably exhibit even in their most degenerated and abnormal forms, constitutes unquestionable evidence of a prior act of impregnation."

Dr. More Madden supports by facts and argument an opposite opinion.

"The numerous theories," says he, "by which the formation of inter-uterine hydatidiform masses has been accounted for, may all be included in one or other of the following hypotheses :—The first and most recent of which is, that hydatid moles are necessarily connected with impregnation, and are the result of embryonic death and morbid growth of some portion of the ovum. The second is, that hydatid moles are not connected with pregnancy at all, but are simply the result of diseased ovarian action. The last, and perhaps the oldest of the theories referred to, is, that these vesicular uterine masses are similar in their structure and development to the true hydatids found in other parts of the body. * * * The first of these theories is, I think, clearly disproved (as a universal law) by the numerous cases on record in which uterine hydatids were expelled by unmarried women whose chastity was unimpeachable. I therefore think it by no means improbable that some of these instances might be accounted for on the supposition that a morbid action or monstrous growth may occur in one of the Graaffian vesicles which modern physiology has shown are discharged from the ovaries at each menstrual period, and that his hydatidiform disease of the unimpregnated ovum may be in some way connected with ovarian disease."

Dr. Madden refers to five cases, two related by Dr. Ashwell, in one of which the patient was a widow of two years, and of undoubted reputation; in another, a maiden lady, where the hymen was unruptured, and of whose chastity there could not be a suspicion; two cited by Dr. Ashley, one of which was under his own care, and symptoms of hydatid formation appeared a few weeks after delivery, and under circumstances which precluded the possibility of a subsequent impregnation, the other related by Dr. Knoch, of Heilgenbeil; and a case related by Dr. Hamilton, where the lady had been living apart from her husband for two years, and he was satisfied as to her chastity.

On the point of treatment, when the diagnosis is established, Dr. Madden differs from M. Pajot, the present Professor of Obstetrics at the Clinique in Paris. In a case where the patient supposed herself pregnant three months the professor advised "the insertion of a gum elastic catheter through the os internum, and the administration of ergot."

Dr. Madden says—"As cases have occurred where hydatids coexisted with natural pregnancy, interference may run the grave risk of destroying a living fœtus."

With respect to the alimentation of women directly after confinement, M. Le Groux, of the Hôtel Dieu, is quoted as adopting the views now pretty general here, and especially insisted on by Dr. Graily Hewitt, in giving meat and soup.

In the chapter on abortion, repeated small venesections are recommended as a prophylactic, where the patient is plethoric, and powdered savine when she is anæmic.

In contraction of the pelvis, M. Tarnier gives 2 5-8 inches as the least diameter compatible with safe delivery. Churchill states that a living child cannot pass through a pelvic whose small diameter is less than three inches.

In unavoidable hæmorrhage M. Tarnier would plug, and wait; and, secondly, if necessary, rupture the membranes.

Dr. Barnes's views as to the development of the placenta and its zonic attachments, on which he founds his treatment of unavoidable hæmorrhage, are not alluded to, though M. Tarnier seems well acquainted with his uterine dilator, which instrument M. Tarnier uses in conjunction with one of his own invention where premature labor is to be induced.

M. Tarnier's instrument consists of a gum elastic catheter, the upper end of which being made with thin walls, dilates into a ball when filled with water or air. This he passes with a guide into the uterus. The ball prevents its expulsion, and the ovular membranes remain unbroken. As soon as the cervix admits, M. Tarnier introduces Barnes's dilator. The other obstetric operations, as the use of the forceps, vectis, cephalotribe, with M. Pajot's method of "repeated cephalotripsy without traction," Cæsarean section, &c., are fully described.

M. Tarnier has most ably put the finishing touches to Cazeaux's description of albuminuria during pregnancy, and its connection with eclampsia; he sums up the causes of albuminuria as arising from either —1. Super-albuminosis of the blood, for though the albumen is diminished relatively to the mass of the other constituents, there is a marked predominance of albumen as compared with the corpuscles (Gubler); or—2. Over distention of the renal vessels; or—3. Albuminous nephritis, which may be either primary or secondary.

Mr. Geo. F. Markoe, an expert Boston chemist, has produced hydrate of chloral more beautifully crystallized than any of the imported samples which have come to our notice.—*N. Y. Medical Gazette.*

TRANSFUSION OF BLOOD.

Report of a Vivisection, illustrating Lectures on the Blood, by Prof. Freer, Rush Medical College. Reported by F. L. Wadsworth, M.D., Chicago, Ill.

The following account of a vivisection, performed before the class, at Rush Medical College, on the 10th Dec., by Dr. Freer, Professor of Physiology and Microscopic Anatomy, may be of value to your readers.

A dog, the weight of which was fourteen pounds avoirdupois, was anæsthetized, the left carotid artery and jugular veins were exposed, a canula inserted into each, and secured by ligatures. Sufficient time was then allowed for the animal to recover his consciousness from the effects of the anæsthetic, when the stop-cock of the canula inserted into the artery was turned, and the blood allowed to flow until sixteen ounces were extracted and the force of the heart's pulsations so reduced that no more could be drawn from the artery with the animal lying horizontally upon his right side. Respiration now gave evidence of syncope, the limbs were rigid, the jaws set, death was impendent.

Meantime, a portion of the blood drawn had been defibrinated and kept at its normal temperature, by a warm water bath. It was now (twenty minutes from the time it commenced to flow from the artery) passed through the canula, by means of a syringe, into the jugular vein. In this manner seven ounces of defibrinated blood were returned to the system of the animal.

On the introduction of the first ounce there was observed decided evidence of increased vigor. During the injection of the second ounce, by some defect in the apparatus, air was admitted into the vein. Instantly the animal succumbed; a tremor affected his entire system, and respiration ceased. Prof. Freer remarked that the animal's life had been sacrificed by the accident; but by convulsive efforts he regained respiration, and in two or three minutes the effects of the occurrence had disappeared. When the seventh ounce had been introduced there remained little, if any, disturbance of respiration, the heart's vigor was nearly restored, the muscular spasm had subsided, and there was apparently no more disturbance of the system than usually occurs at this period after the administration of chloroform for any ordinary operation.

In eight minutes after the blood had been returned the animal raised his head and observed intelligently; and twelve minutes thereafter he voluntarily raised himself and walked across the room, some twelve or fifteen feet. The day following he was sprightly and playful, and the second day after the operation he travelled nearly a quarter of a mile without any evidence of fatigue whatever.

This *vivisection* occurred during the delivery of a lecture on the blood, by Prof. Freer, and was introduced to illustrate the function of the red blood corpuscles in their immediate relations to respiration and the maintenance of vitality, and to demonstrate the fact that fibrin takes no immediate part in restoration from exhaustive hæmorrhage, serum serving as the vehicle of the vitalizing corpuscle, and that transfusion with defibrinated blood may be performed somewhat leisurely and with impunity, care being taken that the instruments used are nicely adapted for the exclusion of air from the vessels.—*Chicago Medical Journal.*

TNE INTERNATIONAL MEDICAL CONGRESS AT FLORENCE.

[From the Dublin *Medical Press and Circular* we take the following account, by a special correspondent of that journal, of the proceedings of the International Medical Congress during its recent session at Florence.]

The Medical Congress met on the 23d instead of the 20th of September, as a meeting of medical men and scientific people was still going on at Innspruck on the 20th. To repay for the loss of time, it was settled that every day two sittings should be held —one, according to the questions of the programme, in the morning, and a second in the afternoon, upon free subjects. It would be impossible, and perhaps useless, to report all the details of those sittings, but I suppose that it may prove interesting to English physicians to hear something concerning the most important subjects which were discussed during the session.

The first subject, and which, as the most interesting, occupied four full morning sittings, was the one of marsh-miasma, its origin, its nature, and what are the best means to destroy, or at least to counteract it. Dr. Pantaleoni, who first treated generally the subject, and others like Dr. Umara, Dr. Spaturri, Dr. Mingrona, gave details about the miasma of Sardinia, of the valley of the Liris, and of the Brutian countries. It is really admirable the accord existing amongst Italian physicians about the laws which rule the development of the palustrian miasma. They all agree on the laws promulgated by Dr. Pantaleoni, that the miasma rises not only from marshes, but also from land newly excavated; that it does not rise very high from the surface of the ground, but it may be carried by the winds to a great distance, and so infect distant villages and towns more than those which, sheltered from the wind, lay near the marsh itself. They all agree that an amount of heat, mixed chiefly with dampness, is necessary for the creation and development of the miasma, which otherwise is nowhere to be found; but where are vegetables is putrefaction; cryptogams in formation, either from the fungous deposits of the marsh, or by stagnant waters on newly excavated earth. So Dr. Pantaleoni concluded that the palustrian miasma is of a vegetable origin, almost as surely as the one of typhus and typhoid is of an animal origin, and therefore two quite different sets of fever, the last generally catching, and the others completely deprived of the contagious or infectious nature. Dr. Pantaleoni went even further, proposing, as a most probable hypothesis, that the miasma should be considered as a real plant, a kind of *alga*, whose spores, carried in the air, should produce the affection. He had determined to undertake some experiments upon the subject in the Pontine marshes, and had invited Dr. Balestra, of Rome, to help him. However, Dr. Balestra had on his own account entered on the same line of most interesting experiments, by which he has shown that the fog and the air of marshes is infested with myriads of spores from an *alga* peculiar to the marshes, and which he named *febrigenica*, and Dr. Pantaleoni *pyretogenica*; that the influence is in proportion to the development of those spores; that by inhaling or drinking them in water, the ague is almost always produced; and that the application of a solution of quinine kills those *algæ* in twelve to twenty hours; an arsenical solution is less active, and the sulphites even less. The infusoria or animalculæ exist in the transported air, although they exist in the fog of the marshes.

These particulars separate immediately Dr. Balestra's (of Rome) experiments from those of Dr. Salisbury of the United States, as this last saw animals and spores. He attributed the affection to a *palmella*, which is demonstrated to be impossible, and then never saw quinine *acting* upon it. Dr. Balestra's observations confirmed so well the proposition of Dr. Pantaleoni, that a vote of the Congress was presented, to state that the existence of those cryptogams as a cause of miasma was a real discovery; but

Dr. P. himself opposed it on the ground that the experiments and observations were not numerous enough; that many other points remained to be cleared, as the way by which those spores acted, if locally or entering in the blood, where it was necessary to ascertain their presence to fix the doctrine as a fact. The Congress deferred willingly to these remarks, and it was proposed that new studies should be brought to a future Congress.

But another important point was maintained by Dr. Pantaleoni in his communication, and that is, that not only *agues*, but very frequently a *remittent continuous fever*, is produced by slow imbibition of the miasma, and that the nervous fever of Rome, the putrid so-called, belongs almost always to this class. He gave all the characters and differences of this fever in distinction from typhoid, as he had already done in the Congress at Paris, and demonstrated its connection with the miasma. Several other Roman physicians also read communications upon the *remittent*, concurring in Dr. Pantaleoni's ideas; but there are other physicians who do not admit it.

It was also remarkable how all the Italian physicians agreed in the idea that the chief cause of the fevers and malaria had been the neglect of agriculture, leading to the destruction of the population, and they advocated a return to the old state as the best means of counteracting the malaria. Dr. P. chiefly insisted upon the dangers of adopting the system of great drainage, at least without having previously by large plantations counteracted the increased development of the miasma; and he at the end expressed the hope that perhaps some chemical means may be found of impeding the vegetation of the mortiferous algæ.

Only one person, Dr. Salvagnoli, differed from the others. He advocated again an ancient Tuscan doctrine, that the malaria was originated from the mixture of salt or sea water with river or marsh water, and therefore he thought that large brooks may prove useful. Dr. Pantaleoni demonstrated the inconsistency of this doctrine with facts—1st. Salt water mixes necessarily everywhere with river water at the mouth of those; in those countries where the tide is strong, sea water comes up for several miles on the river, mixing the two waters, and no malaria is ever originated from that circumstance. 2d. Marshes exist at Verona, at Mantau, in Hungary, on the Ohio, and in India, at immense distance from the sea, and where there is no possibility of the mixture of the two waters. 3d. In all those facts quoted by Dr. Salvagnoli, as in the estuary of Venice, or the cataracts constructed with such an advantage in Tuscany, it is the mud carried by rivers, and full of vegetable substance which has been excluded, or through those valves it has been checked, the repulsive action that the sea exercises everywhere upon the rivers, throwing difficulties to the free discharging of the matter carried with the waters to the sea. Dr. P. advocated again the vegetable matter of the miasma, which is admitted by almost all the present physicians.

Few things were added about treatment, as too obvious to any physician and practitioner.

Another subject might interest English physicians. It is the introduction of *marine hospitals* for scrofulous and lymphatic cases. A Dr. Barellai, by no means a man of any great intellectual distinction, but endowed with the most benevolent instincts and great perseverance, has proceeded to introduce into Italy a great number of those establishments at the sea-shore, where in summer, through the help of the municipalities and public charities, a great number of cases, chiefly of children, are yearly sent for baths, air, sun, and good food, with a very great profit to public health. Dr. Barellai read a paper giving an account of these establishments, which was loudly applauded.

The question of the treatment of cancer, or cancerous tumors, through hypodermic injections, was brought by the programme before the Congress. Dr. Lofrana brought in his system of obtaining disintegration through the injection of gastric juice in the tumor; but, honestly, he remarked how different were the effects in different attempts made by him (Dr. Lofrana) in different cases. Prof. Lebrief, a Professor of Physiology, invited to a particular sitting upon the subject, and those with a superior science and multifarious experiments, demonstrated how difficult it is to get real gastric juice, excepting they have followed so many precautions as he demonstrated indispensable to get it, and always active. However, Dr. Lebrief disapproved of the use of the gastric juice, showing how terribly dangerous its use would be if it penetrated inside one of the sanguineous vessels, as gastric juice acts upon fibrinous as well as albuminous tissue. Introduced into a vessel, gastric juice produces thrombosis and death almost always in animals. Dr. Lebrief, instead of the gastric juice, strongly advocated the use of pancreatic juice injections, as this liquor does not affect fibrine and the vessels, but only discloses the albuminous deposits of the scirrhous, cancerous, and cancroid tumors. The learned Professor, with numerous experiments, demonstrated the best way of getting good pancreatic juice, which, however, he could not himself get pure and active for a very long time.

Dr. Pantaleoni read a communication upon Dr. Chapman's spinal ice bags, and their application to several cases of vomiting, chiefly those obstinate vomitings that sometimes appear, almost rebellious to any treatment, from an irritation of the *unimpregnated* womb. He quoted several cases of success, and chiefly one which had been the puzzle and the despair of all the physicians who had before attended it. He then spoke of several other applications of those bags against neuralgias, giving a beautiful but obstinate case of lateral abdominal neuralgia where the cure had been complete. Dr. Pantaleoni quoted four cases recently published by Dr. Chapman. The communication was eagerly received, as it was quite new to all the physicians present. All wished to try it; Dr. Chapman ought to provide an agency for the sale of his bags somewhere in Italy.

Dr. Pantaleoni gave a notice of Dr. Cruise's endoscope, or rather of Dr. Cruise's improvements to the one of Desormaux, and quoted many cases of its application, and also to the internal cavity of the womb. The instrument was unknown, very much admired, and the general wish was to have a depôt of such an instrument in Italy.

Dr. Laravewitch, from Russia, presented an embriotome, really very useful, and a complete set of obstetrical instruments, which are a practical improvement upon the existing ones.

Dr. Tassi, of Rome, communicated the report of his practice amongst men employed on the railway, and he presented an interesting work upon it.

Dr. Routh sent a communication upon the mortality amongst children in England, which was considered a very interesting one.

Dr. Lombard, at Geneva, gave maps of mortality upon the earth, tracing with different colors the seasons when the mortality was the highest in each point of the globe, and also the countries where the mortality was the greatest.

Dr. Pantaleoni, in a second lecture, spoke of the essential fevers, returned to the existence, character, extension, and treatment of the miasmatic remittent, and took the occasion of entering upon the subject of miliary fever. English physicians do not, perhaps, know that the Tuscan and Piedmontese physicians, and the first chiefly, speak almost of nothing but miliary and miliary fever, to which they attribute all the possible symptoms and all the mortality of Tuscany. Dr. Pantaleoni, with multifarious reasons and facts, denied the very existence of such a disease, except as an unimportant exanthematous eruption, or as an epiphenomenal sign of another fever. He demonstrated how frequently in France, in England, and everywhere, miliary eruptions accompanied typhoid and typhus fever without certainly constituting the essence of the disease; how frequently they were to be seen even in smallpox, in scarlet fever, and measles, only as a symptomatic occurrence; and he concluded that all the cases of miliary which he had met in four years in Italy were cases of remittent fevers, not, as considered by the Tuscan school, cases of zymotic diseases accompanied with miliary eruption. He saw only one case of essential miliary eruption, but it was accompanied with a slight fever, just as it might be in a case of urticaria or nettle-rash.

Such an attack, although delivered in the kindest and most eulogistic terms for the Tuscan profession, could not but excite an uproar amongst some and plaudits amongst the Neapolitan and foreign physicians who partook of Dr. Pantaleoni's views on the subject. Professor Ghinozzi gave a long speech next day in answer to Dr. Pantaleoni; but the defect of this doctrine remained always the same. No precision of description, no pathognomonic symptoms or signs, uncertainty in diagnosis, in prognosis, in treatment—an indefinite state of it from head to foot. The fact is, that the miliarists make a complete confusion of essential and of symptomatic or epiphenomenal miliary eruption, and, such being the case, it is impossible that they could ever come to a practical conclusion upon it.

Dr. Baccelli, of Rome, presented a pleximeter of his invention, to which, however, he attributed those exaggerated praises which usually all inventors of instruments do. Dr. Baccelli read also a paper upon pernicious fevers, and tried to develop a doctrine about an abdominal circulation between spleen, liver, and stomach, which, however, was strenuously contradicted by Dr. Sterzen and Dr. Schief, with such an overwhelming accumulation of experiments and of proofs against it, that there was no possible answer in its defence, although Dr. Baccelli, a physician certainly endowed with much talent, tried his best to defend his conclusions.

Another very important subject was treated:—the comparative advantages of hospital treatment, or of *sécours à domicile*. Dr. Bouillaud rose in favor of the hospitals, chiefly on the score of public instruction. Dr. Pantaleoni, and more extensively Dr. Seitz, of Munich, spoke in favor of adding to the indispensable existence of the hospitals and of the hospital instruction the instruction of the policlinick schools as introduced in Germany, and as much as possible in our social and political state, the distribution of medical treatment and medicines in private houses or at least in barracks, opened as much as conveniently to the air. The statistics quoted by Dr. Seitz about the comparative result of the two systems leave no room for doubt when and where the second system can be employed.

The Congress was closed the 2d of October. The kindness and the benevolence shown by the Tuscan physicians to their colleagues are beyond all praise. Without exception, thanks are due to Professor Brugnoli, Dr. Bos, Professor De Marian, Professor De Renzio, Professor Palasciano, Dr. Pantaleoni, and all the committee and well-wishers of the Congress.

The next International Medical Congress was fixed for 1871, at Vienna.

Medical and Surgical Journal.

BOSTON: THURSDAY, JANUARY 13, 1870.

ETHERIZATION IN LABOR.

THE story of the golden and silver shield comes up again in the question of the expediency of using sulphuric ether in labor. The experience of some practitioners leads them to one solution of the problem—of others, to the opposite conclusion. A third party, again, are led by observation to take one ground at a certain time, to change it at a later stage of professional work.

When first it was ascertained that the pains of parturition might be abated, and still the process go on to its completion, the discovery was hailed as an immense boon to women in childbirth, and ether was in frequent requisition. A few protested against the employment of the agent in the lying-in room as an improper interference with the plan of Providence, which had ordained that man should be ushered into the world by the pangs of travail. But, with most, common sense set aside this objection.

The new broom swept clean. As with other novelties, all that was heard of it, at first, was in its praise. Parturient women inhaled a little ether as the pains were coming on, and thus the latter were abolished, or so diminished as to be comparatively trivial. But, after a while, there appeared those who had seen the reverse of the shield. In now and then an exceptional case etherization seemed to let loose the uterine contractions, so that they proceeded with alarming vehemence. It was much more common to hear it asserted that it weakened them, and rendered labors tedious that had previously to its use been going on well.

Among those who sustain the last-mentioned proposition, there are differences of impression as to what stage of parturition the pernicious influence comes into operation. One finds that, when in the second stage the expulsive action is in force, the ether had better be withdrawn in order that the involuntary process may be aided to the fullest extent by the voluntary efforts of the parturient. Another says that it is just here that he gives the anæsthetic, because, labor being now well established, it will not be prevented from completing its purpose. This latter observer has seen delay caused in the first stage, and perhaps annoying restlessness, with loss of moral and physical control; but is met with the reply of a third obstetrician that he has succeeded in overcoming that same worrying and fatiguing jactitation by etherization. True observers all—but hasty generalization has followed.

Because the attendant of the lying-in room had met with a certain class of results in a considerable number of cases, he naturally, but erroneously, inferred a rule for such cases in general—an instance of what we believe is called in logic reasoning from the minor to the major proposition. Few of us, perhaps, even yet appreciate how large a collection of facts is necessary to establish a law.

All that we can say with certainty in this matter is that, leaving out of view dystocia (in which might be included cases where the pains are of abnormally great intensity), etherization has worked well with some parturients, badly with others. Possibly some practitioners may be skilful enough, proceeding *à tâtons*, to discriminate somewhat among cases of natural labor those in which it will be likely to be of benefit.

We are tempted here to use a very unscientific term, and say that the play of "luck" comes in. We well know that, strictly speaking, there is no such thing as luck, no such thing as chance. Everything is regulated by law, to the devious and apparently capricious path of the mote in the sunbeam. Even the voluntary actions of human beings come *under* law, so that the fatalist historian could calculate the proportion of suicides in the English metropolis for each season of the year. On the basis of this immutable law rests what is called, with apparent paradox, the "doctrine of chances," which regulates important affairs of practical business. Now, to make the application. Given a sufficiently large number of instances of physiological or pathological action, and divide them among a certain limited number of observers who shall manage this physiological or pathological action with equal skill and in the same way; then, and on these conditions, we assume that the different kinds of results would fall in tolerably equal proportion to each individual observer. But, in point of fact, we often have to wait long, at least, before we have any such grand scope accorded to observation. Each deals with fragments of the mass. And so there is a glut here, a dearth there—a deluge at one period, a drought at another. And sometimes the cases are few, while the observers are many.

It is a familiar fact that one practitioner will have several cases of placenta prævia, while his neighbors of perhaps larger practice, and more years of it, never have a case. So, too, in certain not very common surgical operations, one operator from the first, and before, as well as after, he has acquired experience, will have a large share of success; while other surgeons, acknowledged to be of as great skill, and quite as careful manipulators, will be afflicted with ill results. Again, a practitioner attends a large amount of scarlatina during a certain epidemic, with scarcely a fatal case, while other physicians are losing many patients. But, the next time this scourge of childhood comes round, although he pursues the same treatment as before, it becomes his turn to abound in fatal cases. In all these instances there is merely coincidence in fragmentary collections of facts. Thus, the above explanation of our use of the term being premised, we say some practitioners have been merely "lucky" in the use of etherization in labor (different individuals in different stages), others "unlucky."

One point in this connection needs to be carefully borne in mind—the supposed danger of *post-partum* hæmorrhage when ether has been inhaled by the child-bearing. It is sufficient ground for wariness to be told by able obstetricians, who have dealt with hæmorrhage after delivery, that more than once after etherization, the, to them familiar, indications of flooding have been such as to constrain them to remain two or three hours in the lying-in room after the birth of the child. This note of warning is not founded on "hasty generalization," since *caution* demands only a *prima facie* case.

There are those who give ergot to prevent *post-partum* hæmorrhage, whenever they administer ether in labor. We have, in a former article, considered the question of using the former drug by itself. Its employment combined with etherization remains for separate investigation by whomsoever will enter upon its elucidation.

WE TOLD YOU SO!—We take the following passages from a leader in the New York *Medical Gazette*:—

"On the evening of Friday, the 10th instant, a paper of no little interest, entitled "*The case of Hermann Albert, a medico-legal study,*" was read before the Medical Journal Association, by Dr. R. L. Parsons, Resident Physician of the New York City Lunatic Asylum. It appears that a young man named Hermann Albert, who had been twice an inmate of the Bloomingdale Asylum for the Insane, and several times a patient at the New York City Lunatic Asylum, was brought before Judge Ingraham the week previous, on a writ of *habeas corpus*, and was discharged as an improper subject for detention in an Asylum for the Insane. Little was said in the paper regarding the unprofessional evidence, beyond the simple fact that in the opinion of several shrewd business men, Albert was not insane. Of the medical testimony educed there seemed to be three grades:—First, the opinions of men who knew nothing whatever, either of the relator or of the study of mental diseases; secondly, the opinions of those who were either well acquainted with the relator or with the subject of insanity—but not with both; and, thirdly, the testimony and opinions of those who were both well acquainted with the mental history and condition of the relator, and well versed in the study of insanity. The medical men belonging to the first of these classes, were fully persuaded that Albert was not at all insane; those of the second class thought he was insane, but were not particularly decided in the expression of their opinion; while those of the third class expressed a decided and unequivocal opinion, that Albert was then insane, and dangerous, if allowed to go at large. * * * *

"Many points of great importance were noticed in the paper that were not brought out in the evidence.

"There is little doubt that a competent board of inquisitors would have had no difficulty in satisfying themselves and the court that the relator was really insane. On the night previous to his discharge, he was maniacal; in the morning he wrote an incoherent document, and the moment the judge pronounced his discharge, he commenced making an irrelevant, crazy speech in court.

"We have been told that on the fourth day after his discharge, Albert was recommitted to the asylum in a state of acute mania, since which time he has been incoherent, noisy, violent and destructive—the prolonged excitement attending the investigation in court cannot have proved otherwise than highly prejudicial, to say nothing of the evils resulting from his premature discharge.

THE Thirty-fourth Annual Report of the Industrial Aid Society for the Prevention of Pauperism, says, under the caption "Home for Convalescents":—

"From some experience in the cases that apply for assistance at the Bureau of Charity, and which do not seem to belong to the care or supervision of any of the societies in the building, a new home is suggested for a poor but respectable class of persons, who have been discharged from the hospitals and other places as convalescents. They have been accustomed to warm rooms, nourishing food, and good attendance. The change to coarse food, cold and wet rooms, and chance attendance, is not only hard to bear, but does away with all the previous advantage of the hospital, and makes the last state worse than the first. It is almost impossible for the hospitals to retain these persons until they are sufficiently strong to work, and they are supposed to have homes where they can be cared for. This may be the case or may not; but what kind of homes are they, and what kind of food and aid can be given a weak and delicate invalid?" There is at present but slight provision for this class of poor.

EXTENSIVE LESION OF THE SKULL, FROM PISTOL BALL. By EDWIN BENTLEY, Assistant Surgeon U. S. Army, San Francisco.—C. B., a native of Salem, Mass., and lately a resident at White Pine, by occupation a baker, aged 46 years, in a fit of despondency on the 6th of September, 1869, procured a four-barrelled Sharp's pistol, and repaired to a secluded locality in the suburbs of San Francisco, where he discharged one of its barrels into his head. On the following day he was found and taken to the Coroner's office, where, on the 8th, about forty-eight hours after death, the head was examined in the presence and by direction of Dr. Letterman, preparatory to the inquest. The ball entered the superior and anterior corner of the squamous portion of the right temporal bone, producing a stellated fracture, consisting of a superior fissure extending two inches, a posterior reaching quite to the occiput, and an inferior fissure running anteriorly across the greater wing of the sphenoid bone, to the orbital plate, producing a quadrangular-shaped fracture through the vault of the orbit, with sides from an inch to an inch and one-fourth. From the greater wing also, transversely across the body of the sphenoid bone, separating the anterior clinoid processes near their base, breaking up the ethmoid bone and loosening the vomer, continuing over to the opposite side, making a triangular fracture of the left orbital plate, and ending with a fracture of the greater wing of the sphenoid bone of the left side, running down two inches in depth in the temporal fossæ.

The ball was found in the medullary substance of the anterior left lobe, just in front of the fissure of Sylvius, and above the third convolution. It was flattened on one side, and rounded on the other, with a slight dent or concavity on the convex surface. The ball carried before it a circular piece of bone three eighths of an inch—the size of the opening it cut in piercing the skull. The brain was firm, and the course of the ball could be readily traced to the point where it was found imbedded. The extravasation of blood was confined to the temporal muscle of the right side, although a fracture and ecchymosis was observed on the left side on separating the scalp, before raising the calvaria. There was free hæmorrhage from the wound and right nostril.

Remarks.—At the time of the autopsy there were no apparent signs of commencing decomposition. Rigor mortis present. Body well nourished, and of medium size. The course of the ball was distinctly traceable in the substance of the brain, there being slight extravasation, and no coagulæ within the membranes, or between the dura mater and the bone. The entire lines of fracture appear to have been made by the single stroke of the ball. The skull at the seat of injury was one eighth of an inch in thickness, and the bones were nowhere observed to be unusually thin or brittle. The ball weighed 55 grains. The fracture was not simply a seam, perceptible on removing the pericranium and dura mater, but a "simple fracture with displacements;" so that, on raising the skull-cap, moderate force applied to the sections of the occipital and frontal bones readily separated the anterior and posterior portions of the skull through the course of the fracture, they being retained in position only by the attachment of the soft parts. This case is, in a measure, corroborative of the many facts accumulated by the earlier writers on surgery, to show that fractures on one side of the head occur from blows received on the other; for on exploring the skull, a fracture on the side opposite the wound was clearly observable. And also, creative of suspicion, that many recorded cases of this class of fracture were really continuous through the base of the skull; for from repeated experiments, I have demonstrated by slight maceration, a well-developed line of fracture at the base of the skull, which could scarcely have been detected without. There was no discharge from the ears—either sanguineous or serous—the latter so conclusive, when present, of fracture at the base of the skull; and the former of fracture of the petrous portion of the temporal bone. The special point of interest in this case is, the remarkable mischief produced by a single stroke of 55 grains of lead, when propelled by 6 grains of powder, at short distance.—*California Med. Gazette.*

Pregnancy with Hymen unbroken. By Dr. H. L. Horton, of Morrisania, N. Y.—On the morning of the 24th of September, 1861, I was requested to visit Mrs. ——, whom I was informed was in labor. I arrived at the house at 10 o'clock, A.M., and was shown immediately to the room of my patient, whom I found to be 21 years of age, of a nervo-bilious temperament, somewhat of a full habit, and evidently in labor. She informed me that it was her first labor, that it had commenced between 12 and 1 o'clock that morning; also that "she thought that she had another month to go." I immediately made an examination per vaginam, or rather attempted to do so, but failed, as I found the entrance to that canal so effectually closed that by the most careful and persevering application of the touch I could not discover even the slightest opening. Upon questioning the patient about it, she said "that she always thought that she was not like other women, she was so small." After placing the patient in a bright sunlight, I examined the parts through a large cylindrical speculum (I did not use the speculum because it was really necessary, but merely out of delicacy for the patient), through which I was yet unable to discover an opening. I next questioned the husband; he said, "that connection, such as it was, had always been painful, and that if all women were like his wife he was disappointed."

It now became evident that however extensive or complete the obstruction might be, it was congenital; also that there must be an opening through it at some point, for two reasons:—first, she had always menstruated regularly—though slowly—second, she was now pregnant. The questions naturally came up for solution, what is the nature of the obstruction? How much of the vagina does it involve, or in other words, how far does it extend? &c.

Upon resorting to the speculum the second time, and cleaning the surface of the obstruction thoroughly, by wiping it with cotton, it presented the appearance of a dense, whitish, fibrous structure, merging into the surrounding tissue, guarding the entrance to the vagina, so gradually, that no distinct line of demarcation could be observed. About the centre of the lowe half of the obstruction, the patient being upon her back, I detected a small spot of reddish, tenacious mucus, which could not be detached by the cotton, but upon taking hold of it with a pair of forceps, it was found to connect through a small, round opening with something inside. A small silver probe, whose bulb point was exactly 1-16th of an inch in diameter, could, with a slight degree of force, be passed through the opening, the border of which appeared to be somewhat thicker than the surrounding structure, so that the probe passed with something of an elastic spring. By bending the point of the probe nearly to a right angle and passing it through the opening, I could, by depressing well the outer extremity, observe the bulb move along the inner side of the obstruction, which I now made out to be about the thickness of an ordinary dressed sheep-skin. Seeing my way clear, I at once introduced a bistoury, and made a crucial incision, after which I introduced my finger, and very much enlarged the opening by tearing, so as to avoid any hæmorrhage, should there be any bloodvessels in the structure. After the escape of a few ounces of dark, ropy-looking fluid, on introducing my finger I could now distinctly feel the bag of waters, which I at once ruptured, after which there could be distinctly made out a vertex presentation, with a L. O. I. position, anterior variety. The patient was now given an anodyne, in order —speaking mechanically—to put a balance wheel in the nervous system, which by this time had become somewhat disturbed in its movement. In due time it all calmed down; the pains became regular, and with sufficient force, so that about five o'clock, P.M., seventeen hours from commencement of labor, she was delivered of a fine, healthy male child.—*Medical and Surgical Reporter.*

A Case of Poisoning by the Oil of Tansy. By W. Aldright, A.M., M.D., Toronto.—As cases of poisoning by oil of tansy are not, I believe, of very frequent occurrence, I thought it might be of interest to note a case with which I came in contact recently.

On the 24th of August, Mrs. —— consulted me regarding her daughter's health, a prominent symptom being a cessation of the catamenia. I prescribed a chalybeate mixture, and saw nothing more of my patient until the 27th of September. Her appearance then aroused suspicions, which I confided to her mother. I visited her the next morning, and, after a careful examination, told her I believed her to be *enceinte,* which she strenuously denied. That evening a messenger summoned me, saying that Miss —— was "in a fit." I found her perfectly unconscious, though not profoundly comatose; pulse feeble and somewhat frequent; pupils slightly dilated. I fancied that I could detect a faint odor of tansy on her breath; but her mother told me she had been drinking camomile tea, and had not had any tansy. I gave her a mixture containing ammoniated tincture of valerian, determining to return shortly. On doing so in about half an hour, I found that she had vomited a little, and the odor of the tansy was now too strong to be concealed. I managed to get her to drink some warm water, thus keeping up the emesis, and ordered an enema of mustard and water, and afterwards gave her castor oil, suspended in milk. In a couple of hours she was so far recovered as to be able to talk. The next morning all symptoms were gone, except some lightness and pain of head.

I was afterwards informed that before my arrival the patient had been frothing at the mouth.

She asserts that the quantity taken was not over half a teaspoonful; that it was obtained (from a druggist in a tumbler) there being only the one dose. As she refused to give the name of the druggist, further investigation of the subject was prevented.

I may add that no uterine disturbance has ensued; and that the calculations of the patient now agree with physical signs, confirming my opinion that she was between four and five months gone when the abortion was attempted.—*Canada Medical Journal.*

Many years ago we attended a case which was the counterpart of this.—Ed. B. M. & S. J.

The Contagious Diseases Act.—There is great interest evinced by a large section of the Medical Profession in the extension of the Act called the Contagious Diseases Act of 1866 to the civil population. Only a few in our ranks have as yet protested against this experiment; and among the few we have to notice the name of Dr. Chas. Bell Taylor, of Nottingham, who, in a pamphlet of sixteen pages, wages battle against the ideas of Mr. Skey and the Admiralty Commission in a very telling manner. Dr. Taylor quotes from the Blue Book to show that women are sometimes falsely accused of being prostitutes. Thus, Mr. Parsons, one of the Surgeons under the Act, is asked by Dr. Brewer how he knows that women not prostitutes have been brought to him, and replies, "I know one instance of my own knowledge, by my happening to know that the woman was a respectable married woman." The women, it appears, sometimes keep coming up for examination, in order to avoid losing their character by being brought up before a magistrate ; and it seems that the police, when they see a woman out at night, are very apt to suspect that she is a prostitute. Mr. Parsons adds that he has not had *many* cases of virtuous women thus insulted. Bravo ! Mr. Parsons ; and bravo ! the law-givers, who only make felons of *all* the prostitutes, and don't insult many other women. It certainly is an advantage to be born a man. * * * *

The most telling of all arguments against the Contagious Diseases Act extension is quoted from Dr. C. Drysdale's remarks in the *Medical Press and Circular*, where that gentleman asserts that there seemed to him to be rather more cases of syphilis in Paris than he was accustomed to see in London Hospitals. Dr. Taylor also points to the fact that the police of Paris often insult ladies and other women by taking them for prostitutes. "Many a time" (he says, with indignation), "when I have witnessed the arbitrary interference of the Agents de Mœurs, in Paris, with all classes of females, have I said with honest pride, 'Such a villainous system would not be tolerated in England for a day.'" A couple of drunken sailors, says Sneller, of Utrecht, will infect twenty women in a week. Gonorrhœa, pseudo-syphilis, and syphilis are three diseases of very different gravity ; and Balfour is reported to have said he was quite prepared to say that the Act was not successful in reducing the amount of true syphilis, which is the great thing we wish to do. Dr. Taylor shows that, if free hospitals had been opened, quite as much good would have been effected without any tyrannical dealing with women's liberty. Finally, Dr. Taylor shows that the amount of *contagious diseases* is slightly on the increase again in Woolwich, Aldershot, Chatham, Sheerness, Portsmouth and Devonport. Hence he asks a verdict against the Act on several counts. He also adds that many married men, who before had been contented with home indulgences, have now, trusting to the illusory powers of the State to secure "clean prostitutes" for all-comers, gone astray and contracted syphilis.—*Medical Press and Circular*.

We regret to hear that Miss Nightingale has been for years a prisoner in her room from ill-health.

Case of Abscess of the Liver evacuated by Bowditch's Syringe ; Rapid Recovery.—On examination by Professor Maclean, of the Royal Victoria Hospital, Netley, the liver of private Johnson was found much enlarged, stretching four inches and a half below the false ribs, and upwards to the intercostal space between fourth and fifth ribs. A tumor, globular in shape and fluctuating, could be plainly seen and felt, proceeding from under the false ribs in the right hypochondrium, plainly hepatic.

On the 17th of April I drew off 16 oz. of "laudable" pus, using Bowditch's syringe, carefully excluding the external air. Immediate relief was experienced, pulse and temperature quickly fell to the natural standard, the patient soon regained flesh, and was discharged in excellent health.

Dr. Maclean adds that, "from the day the operation was performed he may be said never to have had a bad symptom. The puncture was so small that in a few days its exact position could not be distinguished. In this case there was a distinct history of previous dysentery, from which, in a chronic form, he was still suffering on admission. Yet, as the abscess was clearly single, it is not probable that it had a pyæmic origin. The rapidity with which the constitutional symptoms subsided after the operation was very striking.—*Medical Press and Circular*.

Dr. Lincoln recites in the Boston Medical and Surgical Journal, a case of "vigilance treated with chloral." From some recent developments we are inclined to treat chloral with vigilance.—*New York Medical Gazette*.

Somebody catch that *Gazette* man and hold him till "Nuss" comes!

London Gas.—It is stated that one hour after the gas of London is lighted, the air is deoxidized as much as if 500,000 people had been added to its population. It is also stated that, by the burning of gas twenty-four hours in London, more water is produced than would supply a ship laden with emigrants on a voyage from England to Australia.—*Chemical News*.

Bazin's Liniment in Pruritus.—Lime water and glycerine, of each 30 parts ; oil of sweet almonds, 60 parts. Especially recommended to relieve the pruritus ani so frequent in arthritis.—*Union Méd.*

Medical Miscellany.

MR. EDITOR,—I received, very recently, by mail, the following *card*, post marked Philadelphia. On the ground that, many years since, I was a *tolerated* correspondent of the JOURNAL, though now in the *sere and yellow leaf* and retired from practice, I beg your patience and forbearance while I inquire whether I may not regard the direction of *such* a missive to myself as a gross insult? Or is the world getting on so fast that *all* the liberal professions are yielding to such puerile tricks and degrading frauds?

Jan, 1, 1870. LAMOILLE.

" *Collegiate Agency.*—This agency has been established for the purpose of giving such information as is generally necessary before entering upon a collegiate course of study, or taking any of the learned degrees. Books, medicines, instruments, &c., will also be sent C. O. D., at market rates, upon receipt of orders. Physicians' practices sold on accommodating terms. Through the recommendation of this agency, physicians, lawyers, clergymen and teachers can obtain the honors of all the universities in the United States, such as the degrees of A.M., A.B., M.D., S.D.D., D.D., LL.D., &c. For additional particulars, address " —— ——, —— ——, " Philadelphia."

MEDICAL COLLEGE CONVENTION. — To the Trustees and Faculties of all the Medical Colleges in the United States. The undersigned Committee, in accordance with the instructions of the Convention of Delegates from Medical Colleges, held in Cincinnati in May, 1866, respectfully and earnestly invite you to send delegates to a convention to be held in the city of Washington on the *Friday* preceding the *first* Tuesday in May, 1870, for the purpose of considering all subjects connected with medical college education, and procuring the coöperation of the schools in carrying out a uniform system of medical instruction. It is very desirable that every medical college in the country should be represented in the convention.

N. S. DAVIS,
S. D. GROSS,
GEO. C. BLACKMAN,
F. DONALDSON,
} *Committee.*

Chicago, Ill., Dec. 22, 1869.

DR. H. HAGER, denying the necessity of preserving chloroform in the dark, as prescribed by the Prussian Pharmacopœia, has, after numerous experiments, come to the conclusions, that:—1st. The chloroform of commerce always contains, besides chloroform, other chlorinated substances, to which the rapid change on exposure to light and air is due; 2d. Light alone does not decompose chloroform; 3d. The direct rays of the sun decompose commercial chloroform rapidly; diffused light but slowly; 4th. Air decomposes commercial chloroform, even in the dark, though slowly; 5th. 0.75 per cent. to 1 per cent. of alcohol is sufficient to preserve chloroform for more than a year, especially in diffused light; 6th. Chloroform may be in a state of decomposition, in which it does not show any acid reaction.—*The Pharmacist and Chemical Record.*

THE OLDEST RELIC OF HUMANITY.—The oldest relic of humanity extant is the skeleton of one of the earlier Pharaohs, encased in its original burial robes, and wonderfully perfect considering its age, which was deposited eighteen or twenty months ago in the British Museum, and is justly considered the most valuable of its archæological treasures. The lid of the coffin which contains the royal mummy was inscribed with the name of its occupant, Pharaoh Mikerinus, who succeeded the heir of the builder of the Great Pyramid, about ten centuries before Christ. The monarch whose crumbling bones and leathery integuments are now exciting the wonder-gazers in London, reigned in Egypt before Solomon was born, and only about eleven centuries or so after Mizraim, the grandson of father Noah, and the first of the Pharaohs, had been gathered to his fathers. The tidemark of the deluge would scarcely have been obliterated when this man of the early world lived, moved, and had his being.—*N. Y. Med. Record.*

TO CORRESPONDENTS.—Communications accepted:—Cerebral Convolutions, &c., a Review.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending Jan. 8, 1870.

Cities and towns.	Number of deaths in each place.	PREVALENT DISEASES		
		Consumption.	Pneumonia.	Typhoid Fever.
Boston	111	19	9	5
Charlestown	9	3	0	0
Worcester . .	23	5	3	1
Lowell	15	2	3	1
Milford . . .	1	0	0	1
Chelsea . . .	2	1	0	0
Cambridge .	15	2	5	0
Salem	12	4	0	0
Lawrence . . .	10	3	0	0
Springfield .	4	1	0	0
Lynn	5	1	1	0
Fitchburg . .	1	0	1	0
Taunton . .	6	2	0	0
Newburyport	2	1	0	0
Fall River .	7	1	0	1
Haverhill . .	3	0	2	0
	226	45	24	9

Boston reports seven deaths from scarlet fever and one from smallpox; Springfield two from smallpox.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

PAMPHLETS RECEIVED.—Fourteenth Annual Report of the Trustees of the State Lunatic Asylum at Northampton, October, 1869. Pp. 46.—Prize Essay. Acupressure. By Joseph C. Hutchinson, M.D., Brooklyn, N. Y. Pp. 22. With Plates.

DEATHS IN BOSTON for the week ending January 8, 1870, 111. Males, 52—Females, 59.—Anæmia, 1—apoplexy, 1—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 2—bronchitis, 7—cancer, 1—consumption, 19—convulsions, 2—croup, 1—debility, 1—diarrhœa, 2—diphtheria, 2—dropsy, 2—dropsy of the brain, 5—drowned, 1—epilepsy, 1—scarlet fever, 7—typhoid fever, 5—gastritis, 1—hip disease, 1—disease of the heart, 2—infantile disease, 5—perforation of intestines, 1—intemperance, 1—disease of the liver, 1—congestion of the lungs, 6—inflammation of the lungs, 9—marasmus, 1—cerebro-spinal meningitis, 1—old age, 4—paralysis, 1—peritonitis, 2—premature birth, 1—puerperal disease, 2—scrofula, 2—smallpox, 1—suicide, 1—teething, 1—tumor, 1—unknown, 3.

Under 5 years of age, 38—between 5 and 20 years, 7—between 20 and 40 years, 35—between 40 and 60 years, 16—above 60 years, 15. Born in the United States, 65—Ireland, 36—other places, 10.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

NEW SERIES.] THURSDAY, JANUARY 20, 1870. [VOL. V.—NO. 3.

Original Communications.

ON SOME UNDESCRIBED PROCESSES FROM THE ARCHES OF CERTAIN HUMAN VERTEBRÆ.

By THOMAS DWIGHT, JR., M.D.

IF one of the lowest dorsal vertebræ of any adult skeleton be held by the extremity of the spinous process, the observer, looking at the inner side of the arch from below, will see on either side a short pointed process arising above the origin of the inferior articular process and pointing directly downward. It may be either round and slender or triangular, with a broad base and two sides rapidly uniting, not unlike the processus vaginalis of the temporal bone. It is most marked in the tenth and eleventh dorsal vertebræ, in which its length varies from less than a line to over half an inch. It is most frequently found in the last four dorsal and the first lumbar vertebræ. In every complete set of vertebræ that I have examined I have found it in at least two of the lower dorsal. I have been unable, however, to find any allusion to it in any treatise on anatomy, even in those of Henle and Cruveilhier; and indeed there is no very thorough description of the arches of the vertebræ to be found. In eleven sets of vertebræ I have found this process on one or both sides, as follows:—

1. Present in the last 6 dorsal and 1st lumbar. Very marked in 11th and 12th dorsal.
2. Slightly developed in 7th, 10th and 11th dorsal.
3. In the last 6 dorsal.
4. From a young adult. Well marked from the 6th to the 11th dorsal inclusive, barely visible in the 12th.
5. From a very old subject. In all the dorsal and lumbar vertebræ. Very prominent in the 8th, 9th, 10th and 11th dorsal.
6. 9th and 10th dorsal and 1st and 2d lumbar vertebræ wanting. Well marked in 11th and 12th, slightly in 7th and 8th dorsal.
7. In 7th, 8th, 9th and 10th dorsal.
8. From 5th dorsal to 2d lumbar inclusive.
9. In last 4 dorsal.
10. In last 8 dorsal.
11. Slightly marked in 9th and 10th dorsal.

It will be observed that the root of this process is a part of the line for the superior attachment of the ligamenta subflava between the vertebra in question and the next below. A dissection of the ligaments shows them arising from the edges and posterior surfaces of these processes the points of which are continuous with the elastic fibres, so that it is impossible to determine precisely where the bone ends and the ligament begins. There can be no doubt that these processes are due to ossification of the ligament, but they are sufficiently constant to deserve description with the bone. To understand why they are most developed in the inferior dorsal region we must turn to the general plan of attachment of the ligamenta subflava, and here again text books on anatomy tell us but little. Henle states that the superior edge of the arches in the cervical region is sharp, while in the dorsal and lumbar vertebræ it is rough and even jagged, the roughness extending on to the posterior surface in the former, and on to the spinous process in the latter. This statement is not quite correct. The roughness begins with the first and increases very slowly, being quite insignificant on the upper six or eight dorsal vertebræ. It then suddenly becomes much more marked, being particularly prominent on the eleventh, after which it again subsides, and the upper edges of the arches of the last two or three lumbar are quite smooth. When the jagged appearance is more than usually developed, a sharp tooth of bone often projects upward from the inner side of the superior articular process, as if to join the descending process above described.

The ligamenta subflava are strongest about the junction of the dorsal and lumbar regions, for the following reason:—The function of these ligaments is, by their elasticity, to bring back the vertebræ to their proper position after any deviation therefrom. Now between the first seven dorsal vertebræ flexion of the column is hardly perceptible, but it increases gradually, so as to be quite marked between the last few dorsal and the first one or two lumbar.*

The increase of the roughness and the presence of the as yet unnamed processes agree perfectly with this fact. It may be objected that in the cervical region, where the amount of flexion is undoubtedly greatest, the ligaments are thin and the arches smooth. But it must be remembered that the cervical vertebræ do not require to be held with the same solidity as the lower part of the column, and that the position of the head and neck is chiefly determined by muscular action.

CASE OF TRIPLETS.

By A. B. Robinson, M.D., Boston Highlands.

As cases of triplets occur so seldom and seem worthy of notice, the case reported in a November number of the Boston Medical and Surgical Journal, suggests the report of a similar case, to which I was called in October, 1863, about 9, P.M.

The mother, aged 26, of medium size, pale and always feeble, was confined six years previously with a healthy boy. Since then she had not been *enceinte.* On my arrival I ascertained that labor had commenced, and all symptoms indicated a favorable delivery.

Patient being of a nervous temperament, as the pains became more frequent she became excessively restless, and requested that I should give her ether. The friends also desiring it, I proceeded to do so. In ten minutes she was under its influence and a female child was born; the next pain expelled another girl, and after a rest of fifteen minutes a third girl was born, and immediately followed the placentæ in one mass. The aggregate weight of the three children was ten pounds and seven ounces. One died in three hours, the second in ten days, and the third in seventy hours; they died in the order in which they were born. Neither child could swallow, though all made efforts to nurse. They were well developed, and the functions of the body seemed properly performed.

The mother rapidly and fully recovered, and has since given birth to two children, though at separate confinements. Neither a case of triplets or twins has occurred in either the families of the father or mother. The father is a strong, healthful man, of dark complexion, the mother being light.

Selected Papers.

THE LONG TUBE IN INTESTINAL OBSTRUCTIONS.

By Thomas Hay, M.D., Philadelphia.

Remedies recommended for the relief and cure of disease are sometimes neglected from theories advanced in opposition to their feasible application and utility. But the practical use of a remedy affords the true way of ascertaining its value, and, when well recommended, it should not be discarded unless it has been fairly tried.

The use of the long tube in intestinal affections was recommended more than thirty years ago by a practical observer, and it was then shown that the tube could be passed upward into the colon, and that the views relating to the danger involved were erroneous.*

This instrument has since found occasional favor in the treatment of intestinal obstruction, but the different opinions urged against its practical and harmless employment have tended to keep its advantages in obscurity, and partly account for the neglect which it has received. It seems that the principal objection made to it is a supposed impossibility of safely passing the tube upward into the colon. This is attributed to one or all of several reasons, which must be known to those who have given any attention to the subject.

By some, it is denied that the tube may be passed eighteen or twenty inches upward into the intestine; by others it is said it may be passed, but that it must be in the hands of a skilful surgeon; again, it is urged that the tube will bend upon itself at some point about the promontory of the sacrum, and its end will turn downward toward the anus; or, when the tube arrives at the seat of the obstruction, there is danger that it will rupture the inflamed or gangrenous tissues, and enter into the peritoneal cavity.

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* Richet, Anatomie Medico-Chirurgicale.

* New Views on the Process of Defecation, &c., by James O'Beirne, M.D., in the Medico-chirurgical Review, No. xxxvii., London, 1833, p. 1, et seq. And, On the Primary Causes of Strangulation, and on an Improved Mode of performing the Taxis, in Cases of Intestinal Herniæ. By James O'Beirne, M.D., Dublin, in the British and Foreign Medical Review, No. xii., London, 1838, p. 558, et seq.

In reply to these views it may be shown, that if the necessary care is taken, the tube properly selected, and the forcing pump about to be described is employed, the tube may be introduced to the distance of twenty inches, through the sigmoid flexure of the colon, or to the seat of the obstruction, with little, if any difficulty, and without the uncertainty or danger that is supposed to attend the procedure.

If the tube should bend upon itself, it would not be possible to throw six or eight pints of liquid into the bowels with the forcing pump, without its escape through the anus during the process of injecting; for the pressure upon the sphincter ani and distention of the rectum would be so great that the tenesmus would be intolerable. Even in the absence of other evidence, this should be sufficient to show that it may be passed the required distance without bending upon itself.

Doubtless, if it should be attempted to introduce the tube into the intestine without regard to the seat of the obstruction and stage of the malady, and the operator expected to cause it to ascend by main force, he would not only be disappointed, but serious injury would be inflicted if the patient should submit to the suffering that such an undertaking would induce.

Unless it is by inflation, there appears to be no recognized plan of active treatment in intestinal obstruction, which carries with it any small average of favorable results.

When this remedy fails, or is not suitable, the only resource usually had, is to useless injections given in the common way. In either event, if resolution does not occur, the patient must rely upon anodynes or sedatives, and go through a protracted and painful illness, and perhaps withstand the exhaustion incident to mortification and sloughing, or it may be, undergo an operation, which, even if successful, leaves him in a condition disgusting and loathsome to himself.

Injections of liquid invariably fail from the inadequate means employed. As they are usually given, the rectum is first filled and distended, and the fluid, rising from below upward, soon causes so much pressure and distention in this bowel that the procedure cannot be continued, and a comparatively small and inefficient quantity thus being used, the liquid must be confined to a low level in the intestine. Administered in this way, injections are seldom of avail, and from the annoyance and inconvenience to which the patient is subjected, their use should be discarded in the treatment of intestinal obstruction.

Inflation dates back to Hippocrates, and although discountenanced and even ridiculed, it has been more or less generally employed, and at the present day no one would allow the opportunity to relieve an intussusception to pass by without trying it. In the cases in which it is applicable its use is attended with more success than the injections of liquid that are usually given. But inflation is painful and tedious, and to a certain extent the objections to liquids as commonly administered, apply to it, and its use should be limited to those rare instances in which there may be some hope of cure after the injections given with the long tube and forcing pump have failed.

When the long tube and forcing pump are employed, however, liquid enemata offer advantages that are not to be had by the common way of injecting or inflation. Among the important considerations in favor of this method, is its wide range of application; its facility of effecting the maximum degree of distention; its power of exerting more effectual pressure; and its immunity from causing pain to the patient.

The distention of the rectum and pressure upon the sphincter ani are obviated by this procedure, and the retention of the large quantity of liquid that is usually required is secured. By this method the liquid is thrown far upward into the bowels; each downward stroke of the piston sends the stream of fluid considerably in advance of the end of the tube, and the intestine is filled from a very high point in its course downward toward the rectum. In this way more equable and effectual distention of the upper bowels, as well as upward pressure, are attained, and the downward flow of the liquid being easy of regulation, the enema is longer retained than when the common anal piece and syringe are employed.

Unless the obstruction is in the lower part of the large intestine, the rectum need not receive any of the fluid, until by peristalsis it gradually descends and enters this bowel previous to its evacuation.

The liquid being thrown high upward into the bowels is often brought in immediate contact with the obstruction, and early in the process of injecting, distention and pressure begin, and they are steadily increased by each homeward stroke of the piston until the obstruction is overcome, or the intestine yields to its fullest extent.

All the benefit may sometimes be obtained by a comparatively small enema, and the lower part of the large intestine being kept empty, any impediment that might arise from distention of the rectum is obviated. Even when it may be necessary to administer large distensive injections, all the advantages are usually had, without the necessity of filling the bowels to such an extent as to distend the rectum.

These injections are well borne, and great distention of the bowels may be obtained without being complained of by the patient. In those cases in which it is necessary to fill the rectum, as, when the lower part of the large intestine is obstructed, they are more effectual, and occasion less pain than when the bowels are injected from below upward.

The application of this remedy causes no pain to the patient, and if the obstruction is not successfully removed by its first use, the patient offers no remonstrance to its repetition.

The liquid may be injected in this manner to the full length of the large intestine; and I can hardly doubt that in some cases, in which I used this treatment, a portion of the fluid passed into and distended the small intestine.

But whatever may be the real fact with regard to the small intestine, the efficacy of this treatment for removing obstructions of the large intestine cannot be affected by it.

In cases of obstruction of the large intestine, the injection of liquid by means of the long tube and forcing pump will seldom fail of success; and in view of the uncertainty which often obscures the situation and nature of intestinal obstruction, there is no good reason to reject this feasible and harmless procedure, which may prove effectual, even if the obstruction is supposed to be beyond its influence.

Other treatment may be associated with it, or it may be discontinued and different means adopted; no injury having resulted to the patient from its use.

In cases of obstruction from an accumulation of impacted fæces, the formation of solid concretions, intussusception, and torsion of the bowels, this remedy is invaluable; and in uncertain cases it may be successfully employed.

The most frequent, although least dangerous form of obstruction, is that which arises from an accumulation of impacted fæces. This obstruction, as well as that arising from solid concretions, is protracted and painful; but by the treatment now recommended, very great and early relief will be given, and the affection cut short in its progress.

Obstruction from intussusception is frequent and fatal. In fatal cases intussusception is the most frequent cause. From a comparison of 600 necropsies of obstruction, Dr. Brinton concludes that 43 per cent. of the deaths are caused by intussusception, and that the varieties of intussusception have to each other the following proportionate frequency:—Ileo-cæcal, 56 per cent.; iliac, 28 per cent.; jejunal, 4 per cent.; colic, 12 per cent.

If these conclusions are correct, this means of treatment will be found to lessen the mortality from that cause. The degree of distention and upward pressure that may be produced by this treatment in cases of intussusception at the ileo-cæcal valve and in the colon will, in many instances, effect a speedy cure.

Obstruction from torsion of the bowels, is no less affected by this procedure. Perhaps two-thirds of the fatal cases from this cause are in the large intestine, and the most frequent seat is the sigmoid flexure of the colon.

This variety offers no impediment to the effectual action of the remedy, and in all instances, both of torsion and intussusception, it should be thoroughly tried, rather than trust to a cure by the usual remedies; nature, or the knife.

In strangulation, caused by the passage of the bowel through some abnormal opening, as through a rent in the mesentery, mesocolon, or omentum, this treatment will alter the relations of the abdominal contents, and may facilitate the reduction of the tumor. When the bowels are to be emptied in obstructed irreducible and strangulated hernia, this procedure should always be employed in preference to the common way of injecting.

In obstinate constipation, with or without evidence of obstruction, this remedy affords a valuable means of relief; and in colic, purgative or anodyne enemata administered through the long tube are more effectual than when the common syringe is employed.

In all cases the remedy should be resorted to as early in the attack as possible, and repeated according to the urgency of the symptoms.

The quantity of liquid injected need not be larger than six or eight pints, unless the obstruction should not yield, or its situation point to the small intestine, when the greatest quantity possible to be retained should be administered.

The injection should be retained as long as it can be borne, and in the meantime the abdomen should be manipulated. After one-half of the liquid intended for a single injection is thrown up, it is also a good plan to manipulate the abdomen before the remainder is injected.

The essential qualities of the liquid may have great bearing in a case ; but, whether it is a common enema of water, tobacco, opium, belladonna, or turpentine that is to be administered, the long tube and forcing pump supply the only adequate means by which success may be attained ; and no doubt inflation would be more efficient and less painful than it usually is, if the air were injected through the long tube.

Of the liquids that may be used, oil of turpentine mixed with the yolk of eggs, and thoroughly incorporated with water, supplies an enema possessing advantages which give it a preference for general purposes. A liquid prepared from one-half to two ounces of the oil of turpentine, the yolk of an egg, three ounces of olive oil, and the requisite water, will be found efficacious for general use. This form of injection seems to maintain peristalsis in a condition favorable to promote cure ; neither exalting it to excess, nor depressing it. It relaxes spasm, soothingly stimulates the intestines, promotes easy and free evacuations, without tenesmus, and gently stimulates the system. In the largest quantity it may be retained from fifteen to thirty minutes, and in some instances even longer.

As already intimated, this procedure involves the introduction of the long tube upward into the intestine, through the sigmoid flexure of the colon, or to the seat of the obstruction, and the injection of a properly selected liquid, with the forcing pump. To accomplish this, the tube must possess certain qualities, the proper instrument must be employed to throw up the liquid, and some necessary points in the manipulation must be observed.

Having used this treatment in many cases, I shall describe the apparatus which I have employed for several years past, and shall refer to the points in the manipulation which must be observed in the introduction of the tube.

The apparatus combines all the requirements necessary for the proper administration of these injections, and may also be employed as a stomach pump. It is packed in a neat and portable case, which contains the long tube for the rectum, the spring lever forcing pump, stomach, and accessory tubes, and other appliances, * * * and may be purchased from Mr. Gemrig, No. 109 South 8th Street, Philadelphia.

The tube is twenty inches long, exclusive of the brass mounting at the lower end for attachment to the pump, three eighths of an inch in diameter, and of such a degree of flexibility that it will conform to the course of the intestine by the heat of the body. It should combine with its flexibility a certain degree of stiffness, and have the upper end bulbous, with the opening at the point, and not at the side. The bulbous end should not be disproportionately large, compared with the diameter of the body of the tube.

Many of the tubes now made are larger at the bulbous end than convenience or necessity seem to require.

The pump is made of brass, of about four ounces capacity, with a small tube at the end, and one at the side. The communication between either of the tubes and the chamber of the pump is controlled by a stop-cock arrangement, which is moved by a spring lever attached to the side of the instrument. The small tubes at the end and side of the pump are for the attachment of the long, and one of the accessory tubes. The accessory tubes are simply for the convenience of filling the pump from the basin which contains the liquid to be injected.

When the long tube is introduced to the necessary height, and one of the accessory tubes is placed into the liquid, and the attachments are made, the injection can be administered without changing the arrangement, or any interruption in the process.

Previous to introducing the tube it should be well soaped and oiled, for otherwise it will be arrested in its passage upward, either by the bowel or the sphincter ani.

With the patient lying on his back, the thighs abducted and semi-flexed upon the abdomen, and the shoulders elevated on pillows, the tube is introduced into the anus and passed upward, with the point directed backward and toward the left, until it reaches the promontory of the sacrum, where it is usually arrested, when it should be drawn backward an inch or two, and while it is firmly pressed against the posterior margin of the anus it is again passed forward, and readily ascends beyond this point. Gentle, but firm forward pressure is then kept up until it is passed its full length, or meets with some point which opposes its ascent. This usually happens when it reaches the sigmoid flexure of the colon. The tube is then withdrawn as before, and pressed forward. This may be repeated, if necessary, in rapid and quick succession ; and, if it is still opposed in its ascent, the tube is attached to the pump and again withdrawn a short distance, and as it is passed forward, three or four ounces of the liquid are thrown up, with gentle but firm force. More than one or two efforts are seldom required to pass the tube beyond the promontory of the sacrum; nor is it any more difficult to unfold the convolution of the sigmoid flexure of the colon, or dislodge any mucous folds of the intestine. The promontory of the sacrum and lower part of the sigmoid flexure of the colon are about the only points at which the ascent of the tube is opposed; but if any other presents itself, the same manipulation will overcome it, and the tube may be passed its full length, or to the seat of the obstruction.

Before the tube is introduced the situation of the obstruction should be ascertained whenever it is possible, and in no instance should attempts be made to pass the tube through it. Such efforts, even if successful, would not assist the treatment, but only do harm. When its situation cannot be accurately ascertained beforehand, and it is within the reach of the tube, the degree of resistance and the peculiar sensation communicated to the hand through the tube, when it is manipulated as directed, will always enable the careful observer to recognize the real obstruction from the ordinary obstacles which oppose its ascent.

When the tube comes in contact with the obstruction, or presses against the side of the intestine, and the piston of the pump is rapidly pressed downward, and allowed to ascend suddenly, the patient suffers pain, and the operator feels a sensation of compression and expansion of the liquid within the cylinder of the pump. In such case, the tube should be withdrawn a short distance, or turned on its axis, when the extremity will be freed, and the fluid allowed to ascend, unless the obstruction has been reached. In the latter event, the piston will be moved with less freedom, and if the tube is further withdrawn to allow the fluid to be injected, the bowel about the obstruction will be distended, and if the obstruction should not be previously removed, the fluid will descend in the intestine.

Before the liquid is thrown up, it is advisable to permit any flatus or fluid fæces to escape. The liquid should then be injected slowly and regularly, but the piston should be pushed downward with sufficient force to overcome the slighter impediments of fæcal matter, and to unfold and dislodge any mucous folds of the intestine.

The entire operation is simple and can be accomplished in less time than it occupies to describe it; but it is to be remembered that each step must be conducted gently and no violent force used, otherwise the end aimed at will be defeated, and unhappy results will follow.

If these directions are observed in the introduction of the tube, it may be safely and easily passed to the necessary height.

In conclusion, I desire to refer to two cases of obstruction, which resisted the usual remedies and steadily increased in severity, but were speedily cured by this treatment.

Case I.—A gentleman, aged 52 years, of previously constipated habit, on the 24th day of March, 1866, experienced severe pain in the abdomen, which was accompanied with positive constipation. On the fifth day of his illness I saw him, and found a distinct and well-defined tumor in the right iliac region, which was oblong, and about three inches in length by two and a half in breadth and depth. The tumor was hard, and to some extent movable. The abdomen was tympanitic and painful. Pressure over the region of the tumor gave increased pain. The usual remedies were administered without relief. On the third day of my attendance—the eighth day of his illness—the abdomen becoming more distended, the pain increasing, with thirst and nausea; tongue rather dry; pulse frequent and feeble, and the patient refusing all nourishment, the long tube was introduced its full length into the intestine, and about six pints of the turpentine liquid were injected. The injection was retained about twenty minutes, when a portion of the fluid and some fæcal matter were evacuated. During the day he had two more motions, which contained some lumpy fæces. The patient had a comparatively quiet and comfortable night. The next morning the tumor was still distinctly felt, and apparently little diminished in size, but it was softer, and pressure upon it caused less pain. The symptoms of the previous day were mitigated, but the distress of the patient was still great, and the remedy was repeated. The turpentine liquid was injected through the tube, introduced to the same distance as on the first occasion. By evening the patient had several copious evacuations and very decided relief. Each evacuation contained hard lumps of broken down fæcal matter. The tumor was greatly diminished in size, and from this day forward rapid recovery followed. By the subsequent aid of a pill of compound extract of colocynth, extract of nux vomica, and extract of hyoscyamus, given at bed time, the bowels were moved daily, and in a few days the tumor entirely disappeared. The gentleman is now living and in good health.

Case II.—G. A., aged 23 years, was suddenly taken very ill on the 25th day of April, 1869, with violent pain in the right hypogastric and iliac regions, followed on the second day by vomiting, which in a few hours became fæcal. Although all the usual remedies except inflation had been faithfully employed, his condition became aggravated without any relief to the distressing symptoms.

On the fifth day of his illness everything indicated approaching dissolution, and he was in the following condition:—Abdomen tense and painful, with an indistinct tumor in the right hypogastric and iliac regions; tongue dry; pulse weak and irregular; vomiting of fæcal matter at intervals of from twenty to thirty minutes; extremities cool, and the skin clammy. At 9 o'clock, A.M., on this, the fifth day of his suffering, I saw the patient with Drs. Shoemaker and Scholfield, and, with the consent of these gentlemen, the long tube was introduced twenty inches upward into the intestine, and about six pints of the turpentine liquid were injected. The enema was retained fifteen or twenty minutes, and then came away with some fluid fæces mixed with it.

The patient's condition was unchanged by the remedy, and at 1 o'clock in the afternoon the tube was again introduced its full length, as in the morning, and about eight pints of the turpentine liquid were injected. Suddenly, while manipulating that portion of the abdomen where the tumor seemed to exist, the bowel started and slipped away from under the fingers, and from that moment the vomiting and acute pain ceased. In twenty or thirty minutes the bowels moved, and fluid fæces and some softened, lumpy matter were passed. During the afternoon there were two or three copious motions of a like character, and in the evening the patient, who had not taken any nourishment for five days, ate as heartily as he was allowed. Under the care of Dr. Shoemaker he made a rapid recovery.

This may perhaps be said to have been a case of hernia. It was carefully examined in this respect, and I have lately seen the patient, and there can be no doubt that it was a case of ileo-cæcal intussusception.

As the result of the cases in which I have used this treatment, it may be safely said that the introduction of the long tube twenty inches upward into the intestine, through the sigmoid flexure of the colon, is a feasible and harmless operation, and that many cases of obstruction may be speedily cured, and protracted suffering and even death may not infrequently be averted by the use of liquid injections administered with the long tube and forcing pump.—*Medical and Surgical Reporter.*

A CASE OF FRACTURE OF THE ODONTOID PROCESS OF THE AXIS. RECOVERY.

By W. Bayard, M.D. Edin., Chairman of the Board of Health, and President of the Hospital Board, St. John, N. B.

I believe the following case to be unique, inasmuch as I am not aware of any record of recovery after fracture and displacement of the odontoid process.

In September, 1864, I was called, with Dr. Botsford, to visit C. M., of this city, a little girl six years of age, well formed and robust, who had been laboring for three weeks under what was supposed to be "neuralgic pains" of the head and neck.

Her mother reported that in August the child fell from a pile of boards, about five feet high, striking on her head and neck; that she cried severely at the time, and could not move her head without pain, but no other indication of injury was observed; that the inability to move the head continued, and the pain in the neck increased to such an extent that on the sixth day after the accident medical aid was sought.

I found her able to walk well, though she moved carefully, and supported her head with her hand placed under her chin. The head was inclined forward and to the right side, and any attempt to rotate or move it caused great pain; there was little swelling or pain upon pressure on the occipito-cervical region, and no irregularity could be discovered in the vertebræ of the neck; the pulse was natural, and the general system was undisturbed. Beyond the pain and inability to rotate the head, there was nothing to indicate the severe character of the injury, though it was apparent that the child had been badly hurt.

Warm fomentations and chloroform liniment were applied to the neck, and bromide of potash and anodynes given to relieve pain, with directions to keep the child perfectly quiet and as much as possible in the recumbent posture.

I did not see her after that till May (nine months after the accident), when her mother brought her to me. She walked well, though she constantly supported her chin with her hand placed under it. The head rested upon the right shoulder, and could not be raised from it without severe pain. The neck was much altered in shape, and there was an irregularity in the region of the axis and atlas that gave the idea of a partial luxation of those vertebræ. Her general health was good, and the muscular power was perfect.

Her mother stated that about two months after my visit, the child was sitting at a table playing, when she suddenly called out, "Oh! mamma, hold my hands;" that when she got to her, both arms and legs were powerfully thrown back and moving convulsively; that she had not the power to support her head, which fell from side to side. Her mind was not impaired, she conversed freely, and did not complain of pain. She was immediately placed in bed, when the spasmodic action of the limbs subsided, she fell asleep and slept quietly through the night. The next morning she was perfectly powerless from the neck down; she swallowed with difficulty, but articulated well, and the sphincter muscles retained their power. She continued in this state for three months, after which time the power of locomotion very gradually returned.

The history of the case and the appearance of the child rendered it evident that some serious lesion had taken place involving the cervical vertebræ and spinal cord, and fearing that any sudden movement might produce such pressure upon the cord as to cause instant death, I had an apparatus made by which I could fix the head and *gradually* raise it from its position on the shoulder. The apparatus was made somewhat upon the principle of "Wiess's support for wry-neck," with a bar passing over the head, to which a strap was attached to support the chin, and the head could be moved and placed in any position by means of recompense screws.

She wore the apparatus for nearly a year, when she was able to leave it off with head nearly erect, the neck tolerably straight, and possessing considerable power of rotation. There is a depression behind the right sterno-mastoid process, and a corresponding elevation upon the opposite side.

She continued in this state, with more or less pain, until March, 1867, when she was brought to me complaining of sore throat; upon examination I found tumefaction and redness upon the posterior part of the fauces over the body of the axis. Suspecting that an abscess was about to form, she was directed to gargle frequently with warm water, and return in a week, at which time she appeared, her mother producing the bone,* saying that the child had coughed it up in her presence the day before. I found an opening corresponding in size to the bone, near the body of the axis. In a short time the opening closed, the pain ceased, and the child, to use her mother's words, "got well."

The power of locomotion is perfect; she can walk or run at pleasure, can rotate the head pretty well, and is at present going through a severe ordeal, in the shape of an attack of whooping cough. I may mention that she has, on several occasions, during a paroxysm, lost all muscular power, and fallen in consequence of pressure upon the spinal cord, but the effect has been momentary.

That the bone in my possession is the odontoid process, I think there cannot be a doubt; and that ulcerative action sufficient to disengage it from its possession, should take place with so little constitutional disturbance, is remarkable. It should teach us to admire the wonderful conservative power of Nature.—*Canada Medical Journal.*

Hospital Reports.

BOSTON CITY HOSPITAL.

Three cases of Amputation. Service of Charles D. Homans, M.D. Reported by Charles B. Brigham, House Surgeon.

Case I.—August 7th. John C., aged 19, laborer. Patient, while cleaning off a sugar crusher, an hour before entrance to the hospital, was caught in the machine by the right arm; the limb was completely torn off at about six inches from the shoulder. The wound was dressed with lint and cloth, bleeding considerably. Pulse fair, at 80. Patient was offered stimulants, but refused them. The muscles and integuments were so torn that it was thought necessary to amputate at the joint, and, the patient being etherized, the operation was performed by the lateral flap method. The hæmorrhage was but slight, the arteries being controlled by compression in the axilla. Silk ligatures were placed upon ten arteries, and the flaps were brought together by silk sutures. A compress of linen, wet with carbolic-acid wash (ʒiss. to Oi.), was used as a dressing. Patient was fed on beef essence at intervals of an hour during the night.

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* A photograph accompanies the paper in the Canada Medical Journal.—Ed. B. M. & S. Journal.

8th.—No hæmorrhage from wound; no pain. Patient is in low spirits, taking nourishment only with urging. Evening.—Patient has been uneasy since noon, and now, slightly wandering, tries to get out of bed. Pulse 132. Gr. ¼ of Magendie's solution of morphia given subcutaneously.

9th.—Patient rested quietly during the night. The wound is of a darker shade in the axilla.

10th.—Patient takes beef essence and water gruel well. There is a slight serous discharge from the wound; several sutures were removed and strips of adhesive plaster substituted.

12th.—The lower flap has sloughed slightly and superficially. Pulse 106. Wound discharges healthy pus freely.

14th.—Patient in good spirits; has a good appetite, and sits up nearly all day. The discharge is more serous; the wound is granulating finely, and is syringed out daily with carbolic-acid wash.

20th.—Patient out of bed. Pulse 86. The sides of the wound are approximating rapidly. During the next week the ten ligatures came away.

Sept. 12th.—Wound about two inches in diameter. Patient's general condition excellent.

20th.—Patient out of doors daily. Only a slight ridge of granulations remains. This continued to grow smaller until the 25th, when he was discharged, well.

Case II.—August 9th. James McC., aged 7, schoolboy. Patient, while jumping from the front platform of a horse-car, fell; his left foot was severely crushed by the car wheel, the integument being extensively lacerated, and several of the metatarsal and two of the tarsal bones broken. It was decided to amputate just above the malleoli. Patient etherized; operation by the circular method. There was very little hæmorrhage. Silk ligatures were placed upon five arteries; the flaps were brought together by silk sutures; a dry compress was then bandaged over the stump. 6, P.M., three hours after the operation, pulse 104; no pain. Was ordered beef essence and iced milk at intervals of waking through the night; no opiates given.

10th.—Patient rested well during the night. The dressing was not changed. Leg rests in a bed of oakum.

11th.—Patient takes only beef essence and milk. There is a slight serous discharge from the wound; pulse 95. Dry dressing continued; sutures removed, and strips of adhesive plaster used.

14th.—Considerable discharge from the wound, which is now dressed with simple cerate on lint over the plaster.

14th.—Patient slightly feverish; pulse 112. Wound is syringed with carbolic-acid wash daily.

15th.—Patient feels much better. From this time until the 20th, the discharge from the stump diminished daily; a mass of healthy granulations arose between the flaps, covering the bone completely. The patient's diet consists of eggs, toast and milk for breakfast; broth, meat and milk for dinner; crackers and milk for supper.

29th.—Patient out in a basket for several hours a day.

31st.—Two ligatures came away; within the next four days the remaining ligatures were removed. There is now little or no discharge from the wound.

Sept. 6th.—Doing well. There is but a slight ridge of granulations between the flaps. The stump is dressed with plaster simply.

12th.—Wound wholly healed. Patient walking on crutches in the ward.

14th.—Patient discharged, well.

Case III.—Sarah McD., aged 56, single woman, entered the hospital with a compound fracture of the right tibia and fibula just above the malleoli, caused by being run over by a team. There was considerable hæmorrhage from the wound. The foot was cold; no pedal pulse perceptible. Patient's pulse 72, and feeble. She was freely stimulated by brandy. Being then etherized, the wound was examined. The muscles were much pulpified as far as above the knee; there was, moreover, a fracture of the fibula near its head. Amputation by the flap method was performed at the middle of the thigh. Three arteries were ligatured; the flaps were brought together by silk sutures; a cold compress was applied to the stump. Brandy and beef essence was ordered at intervals of half an hour through the night; gr. ¼ of Magendie's solution was given subcutaneously. On the next day the patient's pulse was 104. As she is blind, and feels no pain, she is not aware that her limb has been removed. She has beef essence and chicken broth, as she prefers, every hour during the day. No hæmorrhage. The stump rests in oakum.

On the 20th, two sutures were removed, giving vent to a few ounces of bloody pus. Pulse 104. The remaining sutures were removed on the following day; the flaps were approximated by plaster, and the wound was syringed out daily with warm carbolic-acid wash. Pulse 96.

23d.—Appetite good; she has now gruel and custard for breakfast and supper, and oyster soup for dinner. The wound is granulating finely.

26th.—Patient complains of more feeling in the stump than before, especially of pain at night; this was relieved for a few nights by subcutaneous injections of morphia.

30th.—Bands of tissue connect the flaps with the bone.

Nov. 4th. A solid mass of granulations fills the space between the flaps; there has been a slight sloughing of the under flap superficially.

10th.—The ligatures were removed; the granulating surface one half the original size and healing rapidly.

26th.—A dressing of ung. zinci oxidi used over the slight granulating surface remaining. Patient sits up in bed nearly all the day.

Dec. 10th.—In hospital nearly well.

In the first case no stimulants of any kind were given throughout his illness. In the second case neither stimulants nor opiates were used. In the third case both opiates and stimulants were employed.

Bibliographical Notices.

Die Hirnwindungen des Menschen. Von Alexander Ecker.

The Cerebral Convolutions of Man, represented according to Personal Investigations, especially on their Development in the Fœtus, and with Reference to the Use of Physicians. By Alexander Ecker, Professor of Anatomy and Comparative Anatomy in the University of Freiburg. Brunswick. 1869.

Although phrenology at the present day, as taught either by Gall and Spurzheim or their later disciples, is accepted in its completeness by but few if any physiologists, yet there remains a tendency to assign to various parts of the cerebrum a connection with some definite class of faculties, not, to be sure, with the nicety and precision claimed by the phrenologists, which are dependent rather on imagination than on observation, but yet with some reference to their more general subdivisions.

Probably the question of aphasia, which has excited so much attention within the last few years, will do more than any other consideration less nearly connected with ordinary medical subjects, to call the attention of the profession in a direction very interesting to the anatomist, physiologist, and perhaps the mental philosopher, that is to the arrangement of the cerebral convolutions.

It is obvious that if the convolutions are regarded as a confused and irregular mass, without symmetry or constancy, and if the plates represent them, as Professor Ecker says, "like a dishfull of macaroni," any attempt at localization of faculties must be nearly useless, and the method of the phrenologists, which is directly concerned rather with the cranium than with the brain, is as good as any other. In short, if there is no accurate knowledge of cerebral topography, corresponding or even approximating to that which we possess of the spinal cord or medulla oblongata, pathological anatomy, one of the strongest allies of physiology, will be of little or no use in constructing the future branch of science which shall establish more accurately the point at which mind touches matter, and we take leave of one of the surest and safest guides in a region which needs all the light that can possibly be thrown upon it from any direction. This knowledge is afforded by but few text books, and by none of easy access to the American student.

The edition of Quain's Anatomy, published in England in 1867, contains a tolerably full account of the convolutions, based principally on the description of Gratiolet, but not so intelligible as that in the little book whose title is here given.

Among other less accessible publications upon the same subject may be mentioned the very elaborate work of Leuret and Gratiolet, and another by the latter author alone, a finely illustrated paper by Bischoff, in the memoirs of Bavarian Academy of Sciences for 1868, a volume by R. Wagner, a paper by Turner in the Edinburgh Medical Journal for June, 1866, and several monographs on particular specimens by Flower (Phil. Trans. 1863), Marshall (Phil. Trans. 1865), and Huxley (Proc. Zoöl. Soc. of London, 1861).

The work of Prof. Ecker is noticeable principally for its succinctness and clearness, avoiding long discussions on undecided points, and yet sufficiently furnished with references to make easy its comparison with the labors of others in the same direction.

Entire originality in descriptive anatomy is out of the question, but the facts verified by our author are here presented in a more intelligible manner than in any other easily accessible work. In fact, it would not be very difficult for any one without a knowledge of German, but provided with the diagrams of this book (the names being given in Latin) and a hardened brain, to arrive at a very good understanding of the arrangement.

After the fissure of Sylvius, which is the most familiar of the sulci, and which Ecker describes in accordance with Bischoff and quite differently from Gratiolet and Turner, the most important point of departure is the fissure of Rolando or sulcus centralis, which is considered by our author as the boundary between the frontal and parietal lobes, while others include in the latter lobe the convolution immediately anterior to the sulcus centralis. The sulci of the two sides arising near the median line and running downward, outward, and forward, form a V, the acuteness of its apex indicating the development of the portions of the frontal lobe nearest the median line.

Starting more or less directly from the anterior central convolution are the three series of frontal convolutions, the third or lower of which on the left side is that fixed upon by Broca as the seat of the faculty of articulate language.

The parietal lobe is quite distinctly bounded from the occipital on the internal surface, by the fissura parieto-occipitalis, but less so on the external surface where these two lobes have no well-marked boundary, as is also the case with the occipital and temporal. The parietal lobe is divided into two lobules by a quite well-marked fissure (sulcus intraparietalis), sometimes interrupted and obscured, however, by being bridged over with secondary convolutions.

The occipital lobe has, like the frontal, though less distinctly, three convolutions upon the external surface, and a lobule, the "cuneus," upon the internal. The latter is included between the fissura parieto-occipitalis and the fissura calcarina, a very deep sulcus corresponding to the hippocampus minor in the posterior horn of the lateral ventricle.

The temporal lobe includes five convolutions, the first (infra-marginal), fourth and fifth more distinct than the others, which are continuous with the second and third occipital.

The gyrus fornicatus is the longest and one of the best known and most distinct of the convolutions. After embracing in its whole length the corpus callosum, it becomes the gyrus hippocampi and gyrus uncinatus, bounding externally the fissure which forms, in the middle horn of the ventricle, the hippocampus major.

The central lobe or "island of Reil," concealed in the Sylvian fissure, has no special names for its separate convolutions.

Of the three methods of determining the importance and significance of the fissures and convolutions, namely, comparison with (1) the fœtal brain, (2) inferior adult brains, as of lower races and microcephali, or (3) the brains of lower animals, especially the quadrumana, Professor Ecker uses chiefly the first, which is as reliable and in most circumstances more convenient than any other. The other methods are, however, of great interest when occasion offers, and have been most successfully followed, especially in the great work of Leuret and Gratiolet, and in the monographs above mentioned.

This is a little book which would be of much service in the hands of all physicians who wish to make their autopsies contribute to the progress of cerebral physiology.

E.

Medical and Surgical Journal.

Boston: Thursday, January 13, 1870.

DYSENTERIC ARTHRITIS.

We find a paper on this subject contributed by Dr. Huette to the *Archives Générales de Médecine*. We give an abstract of it.

Under the name *dysenteric arthritis* Dr. Huette describes rheumatic symptoms as sometimes manifesting themselves during the course of, or shortly after recovery from, *epidemic dysentery*. Although this affection has attracted the attention of a few observers, it is thought not to have been the subject of a special monograph previously to that before us. The authors who, in the last half of the eighteenth century, have mentioned rheumatism as among the possible complications of dysentery, have not made a separate disease out of the combination of the two. They have explained the concurrence as a sort of metastasis of the former; and all, except Stoll, confine themselves to a notice of the bare fact, without attempting to discover the intimate bond which unites them. Zimmerman observed dysenterie arthritis without well understanding its signification. He relates an epidemic of dysentery which raged in 1765 in the canton of Berne, and states that many of the subjects of it had an ill-defined gout, and others suffered from swelling of the feet.

Stoll was the first to express by a well-chosen expression—*morbid affinity*—the relation which exists between the articular affection and the dysentery; but confounds the two affections as a single entity—rheumatism. Dysentery, according to him, is rheumatism seated in the intestine; susceptible of migration, and capable of lodging on one or more articulations. "He cannot conceive of dysentery without rheumatism of the intestines, and regards these two maladies as congeners—daughters of the same mother."

At an epoch nearer to our time Thomas (*de Tours*), in a very remarkable paper (*Recherches sur la dysentérie*) published in the *Archives Générales de Médecine* in 1835, reports with the most circumstantial detail the case of a patient who succumbed and who had suffered pain in all his joints, some of which had been invaded by purulent collections. The right knee and the left wrist had to be laid open with the bistoury. This observer admits a relation of cause and effect between the two disorders—the dysentery calls out the rheumatism in subjects predisposed, or who have had the latter previously. The two inflammations, he says, may go through their stages together, or in succession.

From among the great number of cases of arthritic dysentery observed by Dr. Huette during an epidemic which prevailed in the canton of Montargis in 1854, he selects for analysis only the most marked, giving ten in all. Thus he cites a case of mild dysentery, with arthritis f the shoulder, of the wrist, of the right knee, and of the foot; one of very severe dysentery, with slight arthritis in two joints; another of slight dysentery with arthritis of the knee and of the right ankle; a fourth of slight dysentery with arthritis of six joints; and so on. We translate his fifth reported case.

H., a workwoman, aged 38, of middling constitution, has never before had rheumatic pain. In the course of the month of September she was taken with dysentery, which lasted fifteen days without severe symptoms. There were ten or fifteen evacuations a day; tenesmus; moderate griping; no fever. The dejections had ceased for three days, when the patient experienced rheumatic pains in the following order of situation:—1st, in the sacrum; 2d, in the left foot, with swelling and tenderness on pressure; 3d, in the right knee, which swelled suddenly without change of color, the pain not being severe; 4th, and finally, in the tibio-tarsal articulation of the right leg. The patient entered the hospital of Montargis. The articular pains yielded slowly to the means employed; but the knee remained a long time swollen. The pain in it was not increased by pressure.

The Mode of Invasion and the Symptoms.—Dr. H. had never observed the arthritic symptoms before the second week of the dysentery. They may appear suddenly, when the general affection ceases all at once. This he noticed in subjects who had previously had rheumatism. This mode of invasion pointed out by Zimmerman, Stoll, and Lepecq de la Clôture, had served as a basis for the doctrine of metastasis. It is, however, of infrequent occurrence. Arthritis may appear—the author says, though he stated just before that he himself had not witnessed its occurrence before a certain period of the dysentery—at all epochs of the bowel affection, and in most instances proceeds simultaneously with it. It is especially toward the decline of the dysentery, when the dejections have become less frequent without ceasing completely—during convalescence—that the articulations are apt to be invaded by the rheumatic complications. Finally, after recovery from the intestinal trouble, the patient is not safe from the arthritis; and Dr. H.'s observations show that the latter may set in a month even after such recovery. The secondary malady almost always affects several articulations, either at the same time, or successively. He has noted a lapse of time varying from two to fifteen days between each arthritic appearance; the rheumatism beginning most frequently with the smaller joints. The knee is rarely seized at the first onset.

Pain, redness, swelling.—A piercing or lancinating pain manifesting itself without being preceded or accompanied by fever; more or less tumefaction of the joint with or without change of color in the skin; such are the symptoms which characterize the appearance of dysenteric arthritis. The pain may be very violent at the outset; but more often it is moderate and is not greatly augmented by pressure. The tumefaction is generally inconsiderable; but at the knee is sometimes complicated with effusions easy of detection, which alter the shape of the articulation, and that almost always without redness of the skin. This affection, essentially sub-acute, was accompanied by strong febrile reaction, in one case only out of the ten. In that instance there was delirium, and the fever lasted forty-eight hours, the patient having had rheumatic antecedents. The joint primarily attacked may continue painful and swollen for several days. But this rheumatism, essentially erratic and polyarticular, does not long delay to show itself at other points, and then to fix itself for a longer or shorter time on one of the affected joints.

Migrations; Distribution upon the Joints.—According to Stoll the joints are not alone menaced by the rheumatic complication. The lumbar and cervical muscles, the pleuræ, the intercostal muscles, &c., may suffer. But Dr. H. had not noticed any such cases of rheumatic migration to the muscular tissue.

The distribution of the arthritis upon the articulations of the two sides of the body, and more particularly as to the knees, showed itself in the following proportions: Three times the right side alone was affected. Seven times both sides were simultaneously attacked. Among its multiple manifestations, the rheumatism fixed itself three times on both knees, and six times on the right knee. The author recurs to these points subsequently, when comparing dysenteric with blennorrhagic arthritis.

The Relative Importance of the two Factors of the double Affection variable.—The number of articulations involved, also the duration and intensity of the arthritis, are not always in relation with the duration and the severity of the dysentery.

Duration; Complications; Termination.—Dr. H. has never met with purulent collections either in the joints or other parts of the body. The facts reported by Zimmerman, Lepecq de la Clôture and Thomas (de Tours), leave, however, no doubt of the possibility of this grave but very rare complication.

The duration of the arthritis varies from a few weeks* to several months.

It is mentioned here that the authors already cited had observed cases where the patients were deprived of the use of their limbs for life; the rheumatism having caused anchyloses. It is principally in the knee, and in the tibio-tarsal articulation—the latter more particularly—that the arthritis has shown the greatest tenacity. This sub-acute affection being almost never accompanied with fever, the patients were with difficulty persuaded to submit to absolute rest.

Death as a result of arthritic complications Dr. H. believes must be very rare, though this result is asserted by certain writers to have occurred.

Sex, age, and temperament did not appear to play a prominent part among the predisposing causes. Dr. Huette's patients were of good constitution. In his ten cases there were but two who had rheumatic antecedents.

Treatment.—The author has but little to say on this head. Narcotic plasters, sinapisms and blisters seemed to assuage pain. Internally diuretics, sudorifics and narcotics were used with more or less favorable sequences.

Differential Diagnosis.—The arthritis that has been described presents numerous points of resemblance with simple articular rheumatism; but differs from it essentially in its general physiognomy and its consequences.

The absence of fever, of heat of the skin, of sweating, and especially of complications affecting the grand organic centres, make it, says Dr. H., an apyretic, sub-acute disease, upon the nature and origin of which the dysenteric symptoms leave no doubt. But in view of its symptoms, its course and termination, dysenteric arthritis presents such an approximation to blennorrhagic arthritis that were it not for a few slight differences the same description would be applicable to either affection. Blennorrhagic rheumatism seems to have a predilection for the joints of the right side, which predilection arthritic dysentery shares. The lesions differ in that blennorrhagic arthritis affects most frequently a single articulation, sometimes two, while dysenteric arthritis is almost always polyarticular. Besides, the latter is intimately associated with epidemic dysentery. The older writers considered blennorrhagic arthritis the effect of metastasis. The same cause has been assigned to dysenteric arthritis. Cubebs and copaiba have been violently accused of favoring the first of these maladies. Astringents, laudanum, &c., have been pursued with imprecations for developing rheumatism by suddenly arresting the dysentery. According to Baumès a chill, a sudden suppression of the transpiration, suffice to produce arthritis in an individual affected with blennorrhagia. There, again, according to Stoll, is the whole etiology of dysentery and rheumatism.

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* The French text has it "days." But an examination of the cases shows that the word meant to be used is *weeks*. This is confirmed by the summary, which puts it *semaines*.

As Foucart, however, rejects metastasis as a cause of blennorrhagic arthritis, save by exception, so Dr. Huette denies that origin to dysenteric arthritis, except in very rare instances. Outside of the dysentery Dr. H. finds no cause of the rheumatism accompanying it. Two only of his patients —he reports—acknowledged antecedent symptoms betraying a predisposing rheumatic diathesis.

M. Lorrain is quoted in this connection with reference to arthritic complications in general. According to him, transitory diatheses, conditions of the generative system for example, which comprehend a group of phenomena—urethritis, metritis, the puerperal state, lactation—may favor the development of the rheumatism called blennorrhagic. He calls to mind the rheumatism of pregnant, puerperal and nursing women. M. Bouchut is invoked, who, in his treatise on the diseases of new-born infants, has reported a few cases of arthritis contracted by infants during the first week of life—arthritis accompanied with diarrhœa, and continuing in the child "the morbid genital state of the mother."

Dr. Huette also adduces here animal pathology as offering affections analogous to the conditions described by M. Lorrain; viz., the arthritis of colts and heifers, attendant upon a bad condition of the digestive organs, traced to the unwholesome milk of the mothers.

If, says Dr. H., it be considered that his cases occurred in 1854, and that since that time he has followed up epidemics of dysentery with constant attention without being able to add new cases to those of 1854, it will be understood why he considers dysenteric arthritis as not a common affection, but as one appearing only under special conditions as yet unknown. Will an epidemic rheumatic influence, he asks, coëxisting with the dysentery, be affirmed? In reply, he says this influence would be felt at the same time by a great number of subjects not affected with dysentery, and he has not found this to be the case. With the exception of Stoll, with his peculiar ideas on the subject, no writers on the subject have mentioned the coincidence of articular rheumatism and dysentery prevailing at the same time, except as united in the same individuals. His own cases were collected during the month of September and the first half of October—a season which presents meteorological conditions the least favorable to the development of rheumatic affections. In fact, he says the weather through September was remarkably equable. There was dryness and a temperature above the general average for that month. During October there was more humidity, but moisture combined with warmth, the temperature being more than usually high for the time of year. Here were not found the sudden changes of temperature, nor the cold combined with moisture, laid down as being the principal causes of rheumatic and dysenteric affections. Dr. H. claims, therefore, a special morbid influence impressing upon certain epidemics of dysentery an arthritic tendency.

Dr. Huette deduces from the data given in his paper—which he professes to be imperfect—the following conclusions:—

1. There is a variety of arthritis having for its sole and necessary cause an epidemic phlegmasia of the mucous membranes of the rectum and colon.

2. This rheumatic manifestation does not occur during all epidemics of dysentery. It is subordinate to a special morbid influence. An individual diathesis may favor its development.

3. Dysenteric arthritis, essentially apyretic, differs in its causes, its course, its general physiognomy and its consequences from simple articular rheumatism. It presents a great analogy with blennorrhagic rheumatism.

4. The duration of dysenteric arthritis—the disease being almost always polyarticular—varies from a period of weeks to one of months. It terminates by resolution in a majority of cases; but may, under rare circumstances, end in suppuration and anchylosis.

5. Metastasis is not the explanation of the occurrence of the arthritis, which latter is more rationally accounted for by a morbid affinity. This affinity, the mucous membranes being diseased, produces reflex pathological effects upon the other tissues of the economy.

THE SCIENTIFIC EVIDENCE IN THE CASE OF DR. SCHŒPPE.—We clip the following from the *Boston Daily Advertiser*. The italics are ours.

The respite which the doctors and the Germans induced Gov. Geary to give Dr. Paul Schœppe, sentenced to death for the murder of Miss Steinecke, has had a curious result. Prof. Gneiss, an eminent scientific authority of Berlin, was written to for the purpose of getting the weight of his opinion against the medical evidence relative to the analysis of the stomach, by which Schœppe was mainly convicted. *This he has done*; but he also writes that a Paul Schœppe, age, personal description all agreeing, was convicted of forgery and robbery in Germany several years ago, and only escaped the penitentiary by emigrating to America. It will be remembered that hand in hand with the charge of murder against the Pennsylvania Schœppe went a charge of forging a will by which he was to obtain his victim's property. There seems to be good reason for believing that the two criminals are identical.

There has been no attempt that we are aware of to invalidate Dr. Schœppe's conviction of forgery. That crime were sufficient to exclude him from professional sympathy. The action of the "doctors," therefore, is not to be inferred as growing out of regard for a *confrère* in the same way as the interest of the "Germans" arose from the fact that Dr. Schœppe was their compatriot. Physicians and chemists saw a human being convicted of *murder*, on *medical* and *chemical* testimony which they considered very insufficient and imperfect; and we assuredly hold that professional men merit no ridicule for attempting to clear their corporate associations from all share in what it is to be feared will be, if the sentence is carried into execution, a judicial murder. Because a man breaks one commandment, no authority is justified in punishing him on a false accusation of having broken the others.

TREATMENT OF THE INSANE.—By this time Judge Ludlow's decision in the Draper case, which was published in the *Ledger* on Saturday, has been read in nearly every house in Philadelphia. If it has been overlooked anywhere, or laid aside without full and attentive perusal, the paper containing it should be again referred to. The proceedings in court were based on a writ of *habeas corpus* requiring the officers of the Pennsylvania Hospital for the Insane to show authority or cause for the detention of Mr. George W. Draper at that institution. The evidence showed that Mr. Draper had been placed there many years ago by his father, and that he had remained there fifteen years during the life-time of his father and mother; that at his father's decease a trust fund was left for his continued residence and support at the Hospital; that he was and is of unsound mind, and, though of late years he is free from fits of violence, he is unable to take care of himself. On this evidence Judge Ludlow remanded Mr. Draper to the care of the Hospital—that institution being exactly suited to the nature of his malady, and the kind care and treatment he requires. But the Judge, in making his decision, entered fully into an exposition of the present state of the law on the subject, and the character and management of such excellent institutions as the Pennsylvania Hospital, because the case of Mr. Draper may be considered a test case under a recent act of Assembly. In this respect, the decision is a timely and welcome document, and one that will correct misapprehensions that have found a lodgment in the minds of some of the people. * * * * * *

The health and safety of the [insane] patient are to be taken care of, with a view to his cure and restoration; the family of the alleged lunatic is to be relieved from the great anxiety and distress caused by this affliction, and society is to be protected against possible danger from the sudden and unaccountable fits of violence often exhibited by the insane. It should be borne in mind that our modern institutions for the insane are not prisons, but *hospitals;* that they are no longer mere places for the custody of persons who are otherwise ungovernable or supposed to be so; that persons sent there are not regarded as prisoners, but as *patients* suffering from *disease;* that the primary object is the *cure* of the disease; and that in these hospitals, as now conducted, a very large proportion of the patients *are cured.* Mental disease, however, like all other diseases, is in some cases incurable, and it is only in such instances that the next function of the modern hospital for the insane comes into play, viz., its invaluable advantages as a residence, providing the best means for the care of those who have lost the faculty of self-control. * * * * * —*Philadelphia Public Ledger.*

The Foot-and-mouth Disease.—We have on several occasions quoted from our English exchanges about this disease, which has been raging in England for some months, and, it has been asserted, has given rise to some singular pathological symptoms in the human subject. Our government is becoming awake to the importance of preventing its introduction to this country, and for that purpose the Secretary of the Treasury has issued the following letter to the Collectors of Customs:—

Sir:—The department is advised that a contagious disease, affecting the hoof and mouth of meat cattle and other animals, is now prevalent in Europe, and, as it is of the utmost importance that the introduction of this disease into the United States should be prevented, you are hereby instructed not to allow the landing of any animals brought into your port from England or from the continent of Europe, except upon the production of a consular certificate that they are free from any contagious disease, and that no such disease prevails in the country from whence exported.

All regulations heretofore issued, which are inconsistent with these instructions, are hereby rescinded. I may also add that under date of the 29th of October last, the Secretary of State was requested by this department to instruct consular officers not to give certificates to persons shipping cattle to the United States, except in cases where the animals have been examined by a Government inspector or other expert, and pronounced free from disease; and further, no animals coming from the vicinage of the disease are to be certified by the consul.—*Medical and Surgical Reporter.*

In the U. S. Senate, Thursday, December 9th, Mr. Sumner offered a resolution directing the Committee on the District of Columbia to consider the expediency of repealing the charter of the Medical Society of the District of Columbia, and such other legislation as may be necessary to secure for medical practitioners in the District of Columbia equal rights and opportunities without distinction of color.

Mr. Norton objected to the immediate consideration of the resolution.

Mr. Sumner said if the occasion for the resolution was known there would perhaps be no objection to it. A surgeon who had been brevetted a colonel for his services in the Union cause was now a practising physician in Washington, and he, with another colored member of the medical profession, had, upon making application to the Medical Society of the District of Columbia, been blackballed on the ground that they were colored persons. The effect of that act was to exclude them from coöperation and counsel with members of that society in Washington, and thereby to inflict a penalty on their patients. A rule of the Society referred to, prohibited consultation or association by the members thereof with any resident practitioner not a member. Thus were the colored practitioners shut out from the ordinary opportunities of consulting with their professional brethren on important cases coming before them; their race was degraded by the act, and the profession which was guilty of such ostracism degraded itself. The medical profession of Washington must take notice that this outrage would not be allowed to continue without a remedy, if the speaker could obtain it through the action of Congress.

Mr. Patterson inquired whether it was possible to apply the necessary remedy through the medium of Congressional action. Would not admissions to medical consultations of this society be regulated by the society notwithstanding any remedial action by Congress as proposed.

Mr. Sumner said, that by repealing the existing charter of the Society and chartering a new Society founded on republican principles, which should receive colored people into its fraternity, the object desired might be obtained. This same battle had been fought stage by stage, and the victory had been achieved by stages; the present question was but one additional feature of the struggle for principle.

Mr. Patterson expressed his cordial approbation of a proposition of the character of that proposed; but at first supposed this one might not be practical, nor attain the object sought to be attained.

Mr. Norton then withdrew his objection to the resolution, inasmuch as it was simply a direction to the committee and did not commit the Senate to any action in the premises.

The resolution was agreed to.—*Washington Daily Morning Chronicle.*

CHLORAL.—The following letter from Dr. Henry Bence Jones, we find in the London *Medical Times and Gazette* of Dec. 18.

A note which I have received from Prof. Dubois-Reymond, dated Dec. 12, contains the following passage, which may be of interest to some of your readers:—

"Liebreich has recently added a very interesting fact to our knowledge of chloral. He takes three rabbits of equal size, and into one (A) he injects two grammes of chloral. Into another (B) he injects 0·0015 grammes of strychnia. Into the third (C) he injects first the same dose of chloral, and, after the chloral has begun to act, the same dose of strychnia. (The injections are made under the skin of the back.) The chloral is injected in four portions, and the strychnia at once. Two grammes of chloral for a rabbit of 1·05 kilos. are equal to 100 grammes for a grown-up man of 75 kilos. (a dose absolutely mortal). The rabbit (A) collapses very soon. Touching the cornea seems to cause contraction of the lids, and (A) dies after perhaps half an hour. The dose of strychnia administered to (B) is also absolutely mortal. After eight minutes the strongest tetanus ensues, and generally after twelve minutes the rabbit dies, and half an hour afterwards it already becomes stiff.

"Now, the new fact is this. The rabbit (C) which has received the dose of strychnia after that of chloral very soon revives; never shows a distinct attack of tetanus; one hour and a half after the beginning of the experiment gets upon its legs, and soon after will feed as though nothing had happened.

"I have witnessed the experiment up to the stage when A was dead, B dead and stiff with rigor mortis, and C rallying and trying to sit up.

"So we have the extraordinary fact of the action of chloral and strychnia interfering with one another, and strychnia proving an antidote in the case of chloral poisoning. The reverse does not happen, because the action of strychnia is too rapid compared to that of chloral. The animal poisoned with strychnia dies of tetanus before the chloral is fairly brought into action.

"Liebreich was led to these experiments by the result of a strong dose of chloral administered to a patient with idiopathic tetanus. The jaws, which had not been opened for a week, relaxed, and the patient could take some food. Eventually, however, he died."

ON THE HYPODERMIC INJECTION OF STRYCHNINE IN PARALYSIS OF THE VOCAL CORDS. By Dr. ELSBERG, Clinical Professor of Diseases of the Throat in the University of New York.—The introduction of medicinal agents into the system, by means of hypodermic injection, has very rapidly attained an important place among therapeutical resources. The syringe has been improved, the procedure simplified; with proper care, serious accidents, local or otherwise, can be avoided, and the method, whenever applicable, offers so signal advantages over stomach medication, that there are probably very few practitioners, even in the country, who have not practised it, or who do not value it highly.

But it has been restricted by the mass of the profession almost entirely to narcotics, principally to morphine, and next to this to atropine. Injection experiments have been made with quinine in intermittent and remittent fevers (McCraith, Moore, Chasseaud, Gouverneur Smith, &c.), with corrosive sublimate in syphilis (Lewin, Kohn, Elsberg, Derblich, &c.), and with other drugs; and although the reports in both cases instanced have generally been favorable, in neither has the method really made much progress in the practice of the profession at large.

My present object is to again call attention to the subcutaneous injection of strychnine in paralysis. My own experience refers exclusively to cases in which there was present paralytic condition of the organs of voice and of deglutition, and which could generally, perhaps, be regarded as not central in origin. Courty, Holcomb, Echeverria, and others have reported most gratifying successes in other cases of paralysis.

The first time I made a hypodermic strychnine injection (as I then thought the first time any such injection of strychnine had ever been made), I injected very carefully 1-60th part of a grain of sulphate of strychnia under the skin of the neck of a man in whom one vocal cord stood entirely immovable, and the other approached the median line sluggishly. There was freedom of breathing, but a hoarse, discordant voice, emitted only with extra preparation and great effort, and difficulty in swallowing. Although the patient had already passed through a long course of internal strychnine and other medication, as well as electricity, with only very slight and temporary results, before he had come under my care, I applied the Faradaic and also the constant current[*] locally under the guidance of the laryngoscope, and again prescribed strychnine internally, before I made the injection, as a last resort. I confess I did it tremblingly, but no bad results ensued, and on three succeeding days I repeated the dose, when the beginning of improvement was unmistakable. Emboldened, I put all other treatment aside, and injected 1-30th grain on the fifth day, 1-20th on the seventh, and 1-12th on the twelfth day. From this time onward the improvement obviously increased daily, without anything further being done, and in the course of a month the patient was discharged well. This was more than six years ago, and the patient has continued in perfect health.

Since then I have used strychnine, by hypodermic injections, in about twenty cases of more or less marked paralysis of the vocal cords, and in more than half the number with the most gratifying results. I have rarely trusted to them alone, but yet must ascribe much of the success attained to their use. Lately I have always employed a solution of one grain of nitrate of strychnia in two drachms of liquid (usually $\frac{3}{4}$ distilled water and $\frac{1}{4}$ glycerine, after Waldenburg). I have fearlessly injected as much as 1-6 of a grain at a time—in one case even 1-5—without other unpleasant symptoms arising than a little twitching of the eyes, facial muscles, and even extremities, which twitching, when very slight, I now rather court as a sign of the effectiveness of the injection. Still I would advise most careful watching, and commencing with the smaller doses, say *not more than* 1-30 to 1-20, as hypodermic injection certainly produces the effect of strychnine on the system more vigorously than the same dose, either internally or endermically, and perhaps than in any other way. I have always made the puncture in the fore and lateral part of the neck, more or less high up, or back, according to circumstances. In one single case (in which loss of voice was the only symptom complained of, and bilateral complete paralysis of the crico-thyroid muscles the cause), I repeated the injection sixty-seven times in the course of nearly a year's treatment, with, I think, complete and durable final success. In my unsuccessful cases there was usually not even the slightest temporary improvement perceptible after the injection, so that any visible impression made on the nerves or muscles affected is to be regarded as an encouraging prognostic sign; and if no impression at all is produced after a medium strong injection, perseverance is probably of no avail.—*Physician and Pharmaceutist.*

First Impressions of Pau (Basses-Pyrenees).—So many wonderful accounts about Pau had been given to me by competent judges, that I resolved, on my road to Hyères, to make it an object of observation. At last I found the place which I had for years been longing for, and which most invalids ought to long for; for it is a place little disturbed by wind. Such a quietness of the air we here experienced for a week together as I never saw anywhere before. The smoke of the chimneys rises almost perpendicularly, and the leaves of the trees stand as if they were made of iron or porcelain. All nature is as calm and peaceful as if it were a land of enchantment. It stands to reason that this state of things does not last for ever; but the opinion about the quietness of the atmosphere in Pau is so general, and even quoted against it by the enemies of the place, that there must be much truth in this reputation. At all events, the *mistral* is unknown here, and probably so the still more fatal east winds of Nizza, &c. As to the advantages which absence of wind has for invalids, they are unmistakable. If it is warm, you can dress lightly without fear of suppressed perspiration; and if it is cold, you suffer much less from it than with a windy atmosphere. After a sojourn of several winters on the Mediterranean coast, Pau is a great relief to me in many respects.

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[*] I made some interesting experiments in this case on the difference between the two currents, which may become the subject of another communication. I also tried the two currents *at the same time*, which I found had the greatest immediate effect. This case gave me the first hint as to different neuropathic and myopathic galvanic and Faradaic electrical reactions.

It is clear that the mean temperature is a good deal lower in Pau than in Nizza, &c. But, as I have often said, cold is not the thing invalids ought most to fear. The most dangerous influences are doubtless sudden changes of temperature and cold damp winds. And these things, it is clear, are not here more abundant than at the sea coast of the Riviera.* Besides, I found here a multitude of advantages which make this place very attractive to me. Everything is well organized, and you feel as if in a civilized world. There is a commission of gentlemen—not agents, as in other places—giving kindly information to strangers without emptying their pockets. If the chimneys are not good, you complain to those gentlemen, and your *propriétaire* is obliged to put the chimneys in order.† Coachmen are coachmen everywhere; but the carriages cost 1·50 fr. an hour. Milk is excellent. Goats' milk is abundant. Meat, bread, &c., are very good, and not too dear. The ground is even, and invalids are able to take walks in the town and in the country without climbing. The town is curious, clean, picturesque, and full of resources. The views of the Pyrenees require no special recommendation. There is a chalybeate spring at Pau, and for the summer there are beautiful and useful places in the neighborhood.

There are very good doctors here. As to further particulars about the climate, I am not able to give them yet. I know, however, of very remarkable cases of recovery which were here obtained. The climate of Pau has the reputation of being relaxing. It certainly is not over-exciting. As to its relaxing nature I can say nothing; but of this I am sure—that I feel not at all relaxed since I came here, although it is very warm at this moment. I feel only that I can walk, and sleep, and eat much better.

I strongly advise those who are going to the South to pass through Pau, and take one glance at least at this curious place.—*London Medical Times and Gazette.*

THE *Western Journal of Medicine*, Louisville, Ky., changes its name to *The American Practitioner*.

RANK IN THE NAVY—SURGEONS DEGRADED. * * * That a superior officer should command his surgeon to give an opinion contrary to his judgment and conscience, and that he should be sustained in that requirement by the Secretary of the Navy, and the Surgeon punished for refusing to obey, is a pitch of degradation to the medical service not to be submitted to by physicians who feel that they are men and not dogs. * * * It is difficult to conceive how a Secretary who has the smallest idea of moral principle, could decide that discipline and subordination require the judgment and conscience of a professional man, on a professional question, to yield to the arbitrary will of a non-professional officer. It is evident that there must be a limit to the exercise of such authority; otherwise the surgeon would be bound to amputate at command, and even to kill his patient with poison, if so ordered. When Desgenettes refused to anticipate the natural death of the sick and wounded prisoners, by administering poison as suggested by Napoleon, the autocrat did not dare to play the role of our American Court Martial and our American Secretary by removing or censuring him for insubordination.—*Pacific Medical and Surgical Journal.*

GERMAN pharmacists publish analyses of patent medicines as the best mode of warfare against this increasing evil. Of those of real medical value they publish the proper value in money, which is, invariably, far below the one asked.—*Pharmacist and Chemical Record.*

DEATHS FROM CHLOROFORM.

FROM the report of the London Pathological Society, published in the *Medical Times and Gazette* for Nov. 13th, 1869, we extract the following:—"Mr. Couper exhibited a specimen illustrative of stricture of the rectum, for which colotomy had been performed. The woman had suffered from the disease for five years, and when examined it was found that the rectum, for three or four inches from the anus, was totally disorganized; beyond this was the stricture. She died from the effects of the chloroform, vomiting after the operation, when it was found that the disease was due to the after-effects of ovarian abscess. One of the ovaries contained much pus, and communicated with a sinus between the rectum and uterus, where the pin [pus?] was confined, but it had thence escaped by two passages, one extending into the rectum just below the stricture, which it had caused, and the other into the vagina."

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* The spring in Cannes and Nizza is fatal by the almost incessant east and north-west winds.

† In Cannes there were scarcely any good chimneys, and if you complained the *proprietaire* said, "Mon Dieu, que voulez-vous? Faites l'arranger vous-même;" or something of that kind. The smoke was called there "odeur de bois," and one of the first doctors declared to me that it was good for the chest!

Medical Miscellany.

Excessive Opium Eating.—Dr. A. T. Schertzer, of Baltimore, Md., relates the case of a lady, 28 years of age, who had consumed, in two years, *five thousand eight hundred and forty ounces* of laudanum, and spent *eleven hundred and sixty dollars* in purchasing it. Without pretending to hold her attending physician to an unjust responsibility, the question naturally occurs, as to whether or not this heroic consumption and lavish expenditure might not have been prevented by the employment of judicious means in the first instance? Medical men should always bear in mind that this dangerous habit is easily acquired, and should guard as far as possible against it.

"While attached to the Medical Corps of the Navy," says Dr. S., "I have frequently met with natives of the East Indies who consumed opium with a voracity equal to that of the lady in question, but have never known a similar instance in this country."—*Medical and Surgical Reporter.*

A Displaced Spleen causing Symptoms of Strangulated Inguinal Hernia.—A remarkable case was submitted to the Société D'Anvers by M. Kurns of a woman, aged 40, who was admitted to hospital apparently suffering from strangulated left inguinal hernia, characterized by pain, fæcal vomitings, feeble and rapid pulse, &c., and the occurrence of a tumor about the size of the fist in the right iliac region. Vigorous treatment was resorted to, calomel, injections, &c., and even potential cautery, but without success. On *post-mortem* examination, adhesions were found to have formed between the omentum and the intestines, and flakes of pus in several positions. The tumor was found to be the spleen held by pseudo-membranous bands to the abdominal wall, and also to the intestines, which were very much dilated beneath it. The splenic vessels formed a large cord leading to the left hypochondriac region, but the substance of the organ was normal.

This occurrence may aid practitioners in doubtful or difficult hernial cases, and lead to the more frequent use of gastrotomy.—*Medical Press and Circular.*

A Definition.—The compositor at this office finds *Traumatic* defined in Johnson's and Worcester's Dictionaries "A medicine to heal wounds—useful for wounds." Dunglison, as we know, gives a different meaning. The true interpretation it may prove desirable for medical disputants round about to settle.—*Dental Register.*

[Could not the Editor of the *Dental Register* have said that the compositor referred to was our Mr. Stephens?—Ed. B. M. & S. Journal.]

We have received a specimen of the *European Medical News*, a Journal devoted to selected translations from the medical, surgical and scientific periodicals of the continent of Europe, appearing every alternate month. Edited by Robert Stone, M.D., New Haven, Conn.

Dr. Thomas Addis Emmet has been elected a Corresponding Member of the Obstetrical Society at Berlin.

The Publishers are prepared to bind Vols. III and IV. of the Journal in the same style, cloth and lettered, which gave so much satisfaction last year, and which is intended as the uniform style of binding at this office for the present series. Double vols. price $1 ; single, $0.88. Covers ready for binding, sent by mail, at 60 cents for either double or single volumes.

Books and Pamphlets Received.—Obstetric Aphorisms: for the Use of Students commencing Midwifery Practice. By Joseph Griffiths Swayne, M.D., Bristol, Eng. From the 4th Revised English Edition. With Additions by Edward R. Hutchins, M.D., Philadelphia. Pp. 178. Henry C. Lea. For sale in Boston by James Campbell, 18 Tremont St.—Transactions of the American Ophthalmological Society, Sixth Annual Meeting, 1869; also of the American Otological Society, Second Annual Meeting, 1869. New York. Pp. 76 and 28.—Comparison of the Mortality from Disease in Armies, with that of Men of Military Ages in Civil Life, showing the Groups of Diseases concerned in causing the excess of Mortality in Armies. By A. Newman, M.D., Lawrence, Kansas. Pp. 40.—Memoir of Robley Dunglison, M.D., LL.D. Read before the College of Physicians at a Special Meeting, held Oct. 20, 1869. By Samuel D. Gross, M.D., LL.D., Philadelphia. Pp. 22.—The Physical and Medical Topography, including Vital, Manufacturing and other Statistics of the City of Wheeling, Va. By James E. Reeves, M.D., City Health Officer, &c. Printed by order of the City Council. Pp. 50.—Public Ledger Almanac for 1870. Philadelphia. George W. Childs, Publisher.

Died,—At Brooklyn, N. Y., Dec. 15, 1869, of cancer of stomach, Alpheus Bryant Clarke, M.D., aged 55 years. Dr. C. graduated at Yale Medical College in 1850; from that time to 1864 practised in Holyoke, Mass. Since then in Brooklyn.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending Jan. 15, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases		
		Consumption.	Pneumonia.	Typhoid Fever.
Boston	110	18	4	0
Charlestown	11	2	1	0
Worcester . .	13	2	0	2
Lowell	19	3	3	0
Chelsea . . .	3	0	1	0
Cambridge .	18	6	2	1
Salem	5	1	0	0
New Bedford	17	2	1	1
Springfield .	9	4	3	0
Lynn	7	1	1	1
Pittsfield . .	4	2	0	0
Gloucester .	7	1	1	3
Fitchburg . .	3	2	0	0
Taunton . .	6	1	0	0
Newburyport	5	2	1	0
Fall River .	9	1	1	1
Haverhill . .	3	1	0	0
	249	49	19	9

Boston reports eleven deaths from scarlet fever and two from smallpox. Charlestown, one from smallpox.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending January 15, 1870, 110. Males, 50—Females, 60.—Accident, 2—apoplexy, 1—asthma, 2—inflammation of the bowels, 2—congestion of the brain, 2—disease of the brain, 4—inflammation of the brain, 2—bronchitis, 1—cancer, 4—consumption, 20—convulsions, 4—croup, 4—cyanosis, 1—debility, 1—diarrhœa, 4—dropsy, 1—dropsy of the brain, 1—epilepsy, 1—erysipelas, 3—scarlet fever, 11—gastritis, 1—disease of the heart, 3—infantile disease, 4—insanity, 1—disease of the kidneys, 2—disease of the liver, 2—congestion of the lungs, 1—inflammation of the lungs, 4—marasmus, 8—old age, 1—premature birth, 1—puerperal disease, 4—smallpox, 2—syphilis, 1—teething, 1—unknown, 3.

Under 5 years of age, 53—between 5 and 20 years, 5—between 20 and 40 years, 21—between 40 and 60 years, 20—above 60 years, 11. Born in the United States, 77—Ireland, 22—other places, 11.

THE

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Original Communications.

ON THE SYMPTOMS AND POST-MORTEM APPEARANCES IN A CASE OF SUSPECTED POISONING BY OXALIC ACID.

Read before the Society for the Promotion of the Sciences connected with Medicine, by Dr. James C. White, November 2d, 1869.

History.—On the 16th of January, 1869, Mrs. X., a large woman in middle life, fell and broke the head of her femur within the capsule. She was placed on her bed and never rose from it again. She remained comfortable except upon motion of the leg until the 26th. Upon that day she complained of some heat in the stomach, and in the evening an enema was given, as on other occasions during her illness, which was followed by a discharge of hard fæces. Later in the evening, at ten o'clock, she became uneasy and felt nausea, and at twelve she vomited, and again at one, at four, and at six o'clock, the morning of the 27th. The quantity each time was said to be about a teacupful, and was liquid. It was said to have stained the clothes upon which it fell yellowish. During the day (the 26th) she had eaten a custard and drank tea, broth, and at least a tumbler of lemonade. She said during the night each time she vomited that she felt very bad, and once as if she were going to die. She was also very thirsty, and slept scarcely at all.

On the 27th, the second day, she was seen during the forenoon by her physician, who found her in a very low and feeble condition, with a pulse of 130 and respiration at 25 to 30. Her mind was dull, but yet conscious. She seemed to him to be in a state of collapse or partial paralysis. Her skin was very red, and her mouth, throat and lips presented the same appearance, that of lividity or a lilac color. The skin was nevertheless cold and clammy. Stimulants were given. At three o'clock, P.M., her pulse was still feebler. At ten o'clock she was again visited, and her pulse was at 160. There was no response to the stimulants. He gave her an opiate without visible effect, magnesia and carbonate of ammonia. During this day there was more or less flow of fluid from the rectum, soiling the bed, but there was no purging at any time. Burning at the epigastrium was also spoken of early in the day. During the night she complained of violent headache, and was still thirsty.

At eight o'clock on the following morning, the 28th, the third day, Dr. —— found no change except a gradual sinking. There was a complete absence of all voluntary power, and the insensibility became deeper and deeper throughout the day. There was no longer any complaint. The pulse was a mere thread and high. She died at four o'clock in the afternoon, forty hours after the vomiting began. Such is the clinical history of the case as minutely as can be obtained.

Section.

Post-mortem Appearances.—Twenty-four hours after death the following organs were removed from the body and brought to me for examination:—the stomach and œsophagus, intestinal canal, spleen, kidneys, liver, and part of the pancreas. Subsequently the brain was examined and found to be healthy; the fracture of the femur was also found free from all traces of inflammation. The organs were examined by me forty-eight hours after death, and presented the following appearances:—

The *stomach*, which with six inches of œsophagus attached, was tied at both extremities, contained ten or twelve ounces of greyish fluid of the consistence of gruel, with an acid smell and reaction. It was marked externally by dark streaks corresponding to the position of the bloodvessels, and by large stains of a scorched appearance near the œsophagus. Within, its lining-membrane for an inch or more surrounding the œsophageal opening was of the same black color as that tube, and the bloodvessels in the depending portions filled with black blood were visible through it. Elsewhere and generally the mucous membrane was of its natural color or paler than usual. The structure of the mucous membrane and other tissues was unchanged, except in the lower portions, where it was soft and thin (probably a cadaveric change). There was more or less mucus attached to its inner surface.

The *œsophagus* exteriorly was of a uniform deep slate color. Its interior surface was stained of a deep black, the same color penetrating in parts to and through the muscular tissue. The lining-membrane was not materially softened, nor easily separated from the tissues beneath.

The *intestinal canal* was filled with bile in the upper portion. In the ileum, near the colon, and in the upper large intestine there was considerable black fæcal matter of the consistence of marmalade. Below this and along the rectum were fæcal masses of natural consistence. There was nothing unnatural in the condition of the intestinal tract besides the usual cadaveric softening of the mucous membrane and reddened patches.

All the *other organs* were apparently healthy; the blood contained within them being generally bright red.

Analysis of Organs and Contents.

An analysis of all these organs and their contents in whole or part, conducted by the most delicate chemical processes known, but which it is not necessary for the purpose of this paper to describe, failed to show the presence of a trace of any mineral or alkaloid poison. In the examination for the latter the physiological tests were also employed, and with the same negative result.

In the absence, then, of any positive proof by analysis that poison was administered in this case, what is there in its history or the *post-mortem* appearances as just given to indicate the cause of death? May they be explained by the possible existence of any disease with which we are acquainted? It is well known that there are certain cases in which it is impossible to determine without the aid of analysis whether death is produced by natural causes or by poison. In this instance we have the symptoms of an irritation or inflammation of the alimentary canal, and also others which might be caused by or occur in the course of various affections, but taken as a whole they point much more strongly to the action of a poison than of any known disease. The pain and heat in the stomach, thirst and vomiting, are signs of irritant poisoning, but might otherwise occur; the collapse, stupor and partial paralysis are indications of narcotic poisoning, and yet might be produced by natural causes. Taken together, the two sets of symptoms cannot be referred to any one known disease, but they are such as follow the administration of so-called irritant narcotic poisons. If now we interpret these symptoms by the light furnished by the *post-mortem* appearances, no doubt as to their cause can longer exist. There is no disease which can produce such a blackening of the tissues of the œsophagus and stomach as was found in this case and is still preserved in the specimen exhibited. The occurrence of black spots within the stomach cannot be looked upon as an infallible sign of poisoning, as Christison was inclined to believe. Some degree of dark brown or even black coloring as the result of acute idiopathic softening, and of changes after death, caused by the action of the acid of the gastric juice upon the blood either within its vessels or extravasated, has been observed. Such appearances, however, are more diffused and general in their distribution, not in the form of distinct streaks, spots, or points. Melanosis, too, may give rise to black discoloration, but its histological elements are easy of recognition. In this case the intense black color penetrated in many parts the muscular coat of the œsophagus and gave to the whole tube externally a dark slate color. The interior of the stomach surrounding the œsophageal opening presented the same appearances, while the corresponding portion exteriorly, it will be remembered, was marked by large stains, as if scorched.

If, then, these appearances are such as could not have been produced by any natural disease, are they also sufficiently characteristic to indicate the particular poison which did produce them? Many of the irritant poisons produce more or less blackening of the tissues of the alimentary canal. The concentrated alkalies and mineral acids act in this way, but they likewise cause great disorganization and destruction of the parts with which they come in contact, so that they could not have been the agent used in this case. Oxalic acid is loosely and incidentally spoken of in some works as occasionally producing such discoloration, but to its action upon the stomach I shall return. Phosphorus produces ecchymotic patches at times. Corrosive sublimate and other mercurial salts stain the tissues of the alimentary tract, as is well known, a dark slate color, but they cause at the same time great inflammation, and are always easily recognized by chemical tests in the parts thus colored. They therefore must be excluded from the case. The same may be said of the salts of silver, which chemical analysis could not fail to detect. The vegetable irritants, too, will sometimes produce deep and extensive blackening of the lining membrane of the stomach, at least, but in such cases there is a proportionate intensity of inflammation accompanying with corresponding symptoms during life and characteristic appearances after death. The substance employed could not have been one of them.

Fortunately the organs were not the only materials furnished me for examination. Two pails had also been brought for analysis. No. 1 contained a sheet and some pieces of cotton cloth in a moist condition, which had been taken from a large tub of water in which they had been soaking several days. No. 2 contained towels, pieces of cloth, a mustard poultice, a cotton batten fomentation and a fomentation of herbs (wormwood) in a flannel bag. The sheet and towels had been used on the bed and about the person of the deceased during the last days of her illness, and were stained apparently by intestinal discharges or vomiting. These stains were examined for the presence of mineral poisons with negative results. Small portions were also tested for oxalic acid, but no perceptible quantity was obtained.

March 9th.—The water in pail No. 2, which had been frozen solid when brought, and in which the towels, fomentations, &c., had been soaking, some two quarts in quantity, was filtered and subsequently condensed by evaporation. It was neutral. Hydrochloric acid was added to it and a solution of sulphate of lime. It was then neutralized by ammonia and allowed to stand over night, when it was found to contain a great number of very large and beautifully formed octahedral crystals of oxalate of lime. These crystals gave all the characteristic reactions of oxalic acid. The filter through which the water had run was examined chemically, but contained no oxalate of lime, showing that the oxalic acid in the pail was present as some soluble oxalate in the water, and not as oxalate of lime or magnesia.

The entire sheet from pail No. 1, said to have been taken from the tub of water, was then examined in a similar way, and from it a very little oxalic acid was also obtained in the form of some soluble oxalate. The amount of oxalic acid extracted in this way from the water in pail No. 2 and from the sheet and towels was from one to two grains.

It will be seen, therefore, that there was obtained from the bed-clothing and towels stained by discharges from the body of the deceased a small quantity of oxalic acid. These articles had been soaking in a tub of water, and must have given up to that the greater part of the acid they at first contained when they were removed from it. The quantity left behind in the tub was not ascertained. Moreover, these articles were not those which received the first discharges of the deceased, as the bed-clothing used during the first night of the illness, when the only vomiting occurred, was removed and washed. The amount of oxalic acid obtained by analysis, therefore, in no way represents the quantity voided during life. (The herbs used in the fomentation found in the pail contained no oxalic acid.)

That oxalic acid was not found in the analysis of the stomach and contents and in the other organs in no way weakens the theory that the deceased died from its effects. Taylor says the residuary quantity in the stomach is generally very small. A case is reported where death occurred only two hours after ℥iss. was taken, and only thirteen grains were found. Another in the *Medical Times and Gazette*, April 25th, 1868:—a person took three-fourths of an ounce, and died in ten minutes. The tissues of the stomach contained only two grains, its contents none at all. The *Dublin Quarterly*, vol. xxxiv., p. 220, gives a case in which the patient survived two and a half days, and not a trace could be found. Christison says none may be found in the stomach or its contents, even if no vomiting occurs, if the patient survives any length of time. These instances are sufficient to show that the failure to find oxalic acid after death, especially in such a case as this, does not at all invalidate the theory of its administration.

How closely then do the symptoms and *post-mortem* appearances recorded in this case agree with those attributed to the action of oxalic acid in works on toxicology? Poisoning by this substance in Germany and France is so extremely rare that the accounts of it in the works published in those countries are almost wholly derived from English authorities. In this country it has seldom been employed as an agent in criminal poisoning, and but little attention accordingly has been given to its effects upon the system. Its *action* is peculiar; at times producing all the symptoms of the most powerful corrosive, at others causing almost instant death, like the most deadly narcotics. Its first and local effect is to be explained by its chemical action on the gelatinous structure, according to Van Hasselt, dissolving these tissues easily, and causing softening of the muscles and nerves. Its later and constitutional action is mainly sympathetic. Even in a very dilute condition, by which its local effect is entirely prevented, it acts as a powerful poison on the nervous centres, the heart, spinal cord, and brain, according to this author, by which the rapidity of its action in some cases is explained. According to Orfila, "the more dilute, the more powerful its action." In very large doses, according to Christison, in animals it acts upon the heart, causing paralysis cordis, in medium doses upon the spinal cord, giving rise to convulsions and asphyxia, while with the smallest fatal doses the brain is principally affected, causing stupor. Nearly all our knowledge of its physiological action is limited to Christison's observations made forty years ago.

It may be as well, while speaking of its action, to refer to the quantity required to produce death. ʒi. has killed a boy of 16 years, and this is the smallest fatal dose on record. Three, four and six drachms have also killed, the first named quantity a woman of 28 in an hour; but recovery has taken place after ℥ss. and ʒi., its action of course depending upon the amount retained and absorbed.

Comparison of Symptoms.

Taste.—Oxalic acid is extremely sour, and this property, together with the great burning sensation it produces in the mouth, it might be thought, would prevent its employment in criminal poisoning. In this case it will be remembered no complaint at all was made, and no suspicions apparently excited in the deceased that she had taken anything wrong. She drank a tumbler of lemonade during the day; could this have contained and disguised the presence of a fatal dose of oxalic acid? To determine these points, ℥ss. of the acid was put into a tumbler of water (six ounces). It readily dissolved. This, sweetened with as much sugar as the solution easily took up while cold, gave a taste quite acid, like citric acid lemonade, putting the teeth on edge, but in no way unpleasant, and producing no smarting or burning. Held in the mouth in considerable quantity and for a minute, it caused a slight burning sensation, and a faint whitening of the tips of the lingual papillæ. It was such a liquid as might be easily mistaken and swallowed for very sour lemonade. In such a way a fatal dose of the acid could be easily given.

Taking the symptoms in the order of their occurrence, the first complaint was of some heat at the epigastrium in the afternoon, which increased during the evening, and was accompanied by great pain in the same region during the night. These symptoms ceased twenty-four hours before death. They are common to all irritant poisons, and differ from the ordinary effects of oxalic acid in their mildness and the tardiness of their approach. The same may be said of the *vomiting* which, it will be remembered, began on Tuesday night at 12 o'clock, and was preceded by two or three hours' *nausea*. The lemonade was slowly taken probably between noon and the beginning of the nausea in the evening. Emesis occurred four times only between midnight and 7 o'clock on the following morning. There was nothing distinctive in its appearance, about a cupful of yellowish liquid each time. *Vomiting* takes place after the administration of oxalic acid generally either immediately or in a few minutes, and its color is greenish, brown, or black, consisting of mucus and altered blood. Often the vomiting is incessant until death. In some cases little or none has taken place; in one, reported by Christison, it was delayed seven hours after taking ℥ss. in five ounces of water. The more dilute, the longer is this symptom delayed.

There was great *thirst* in this case, as is common.

Purging did not occur at all in this case, although Dr. —— thought there were several small watery dejections on the second day. During the night of the vomiting there were certainly several discharges of hard fæcal matter, and the same was found in the rectum after death. It is a symptom recorded as sometimes present in the later stages, if life is prolonged.

Abdominal tenderness is generally a prominent symptom, accompanied by great pain; here there was some degree of pain complained of during the first night, but no tenderness was produced on pressure over the abdomen at any time. In a case reported by Dr. C. T. Jackson an ounce of the crystals was taken, and death resulted in ten days, but there was at no time any tenderness.

The *tongue and lips* are often swollen and sometimes covered with white patches; in this case both were of a liquid or lilac color. The local action upon the mucous membrane of these parts varies, of course, according to the method of administration.

The *skin* is described by observers as livid and cold, and covered with a clammy perspiration, as cyanotic even in rapidly fatal cases; in this instance it was suffused and of a livid redness, also cold and clammy.

The state of the *pupils* is not alluded to in any toxicological work; they were here not dilated, but sluggish.

The *respiration* in poisoning, so far as the books allude to it, is generally deep and slow (Tardieu and Taylor); in this case it was 30 in the minute on the second day. Wormley, however, says the respiration is hurried, and Guy makes the same statement.

The *pulse*, too, differs in this case remarkably from the accounts of authors. On the second day it was reported as small, and from 120 to 140 per minute; on the next day 160 and scarcely perceptible. Tardieu describes the pulse as small, irregular, and scarcely perceptible; Van Hasselt, as slow and scarcely perceptible; Wormley, as small, fluttering and feeble; Taylor, as small, irregular, and scarcely perceptible; Werber, in his Handbook just published, as small and slow; Falck, as weak and scarcely perceptible; Christison says circulation is depressed and pulse always very feeble; Oesterlen, as weak, slow, and imperceptible some hours before death; Orfila says nothing of the pulse, and Caspar makes no mention of it; Briand and Chaudè, as feeble and imperceptible. It will be noticed that some of the leading toxicologists fail to speak of the rate of the heart's action, although all agree with regard to its feebleness. Two of them only speak distinctly, and they say that it is slow. This illustrates how much remains to be done in the way of accurate observation, even with some of the most common poisons. In the *Lancet* of February, 1842, there is a case reported in which it is stated that there was no failure of the pulse. Christison also mentions that in one of his experiments, "contrary to the general fact, the pulsation of the heart in a dog was so strong as to be audible at a distance of several yards." Guy, however, in his forensic medicine, unlike all other writers, makes the statement that the pulse is small and frequent.

The state of the *nervous system* is a peculiar feature in poisoning by oxalic acid. The patient is described as affected by a sort of stupor and semi-unconsciousness from which he is with difficulty roused, and by lassitude and numbness of the limbs, approaching paralysis. In some cases there are cramps and convulsions. In this instance the mind was recorded as dull, but not incoherent, and the patient as in a state of partial paralysis at first, with complete absence of all voluntary power and increasing insensibility on the day of her death.

The most prominent symptoms which generally occur and were entirely *absent* in this case, and which have not yet been alluded to, are *spasms* and *dysphagia*. According to Tardieu, all symptoms but those of vomiting and collapse may be absent.

The *fatal period* varies greatly with the amount and concentration of the dose. An ounce has killed in ten and in thirty minutes; possibly once in three minutes. Where more than half an ounce has been taken, it is generally fatal within an hour. Persons have lived, however, after large doses for five, seven, and even twenty days. In this case, death took place forty hours after the vomiting began; just two days, probably, after the poison was first given.

A comparison of these symptoms, then, with those which have been recorded as previously produced by oxalic acid, leads me to the conclusion that, with the single exception of the pulse, they correspond closely to the effects produced by this substance given in a dilute condition, or through an interval of several hours. How far this apparent exception is an exception to the real toxicological action of oxalic acid is a matter, I think, of uncertainty. Allowing its full validity, I have no doubt that oxalic acid was taken by the deceased in the manner above alluded to, and that the symptoms in the case were wholly due to its presence in the economy.

Let us now see how the *post-mortem appearances* agree with those known to be produced by this poison. The only change worthy of note in the organs brought to me for examination, as will be remembered, was the extraordinary condition of the œsophagus and stomach. How far up the former this color extended is not known, as the fauces and tongue were not removed nor examined after death. The six inches seen were uniformly affected. It is only to these organs, therefore, that my comparison will extend. Taylor describes the mucous lining of the stomach after death as "pale and softened, without always presenting marks of inflammation or abrasion, if death has taken place rapidly. This membrane is white, soft, and brittle, easily raised by the scalpel, and presents the appearance which we might suppose it would assume after having been for some time boiled in water. The small vessels are seen ramifying over the surface, filled with dark-colored blood, apparently solidified within them. The lining membrane of the gullet presents the same characters." Nearly the same description may be found in most works on Toxicology. It in no way, however, resembles the condition of these organs in this case, and would seem, if applicable without exception, to exclude oxalic acid as the agent in it altogether. A more general examination of the literature than Taylor has made will show, however, that oxalic acid is as remarkable in the variation of the appearances it may produce after death as in its physiological phenomena. It has caused death without giving rise to any morbid appearances. Its action, as we have seen, when diluted, is directed more to the nervous system than towards local irritation. We do find, however, allusion in some toxicological works to a blackening of the tissues. Most writers mention the black appearance of the blood within the vessels of the stomach, and Christison states that after concentrated doses the "stomach is found to contain black extravasated blood, exactly like blood acted on by oxalic acid out of the body;" "the inner coat shows streaks of black, granular, warty extravasation;" and again, the "inner coat of the stomach was pulpy, in many points black." Van Hasselt says the mucous membrane is sometimes colored brown from altered blood. Wormley states that "the lining membrane of the œsophagus is sometimes much softened and the bloodvessels congested with dark blood," and that "in a few instances the coats of the stomach presented a dark or nearly black appearance." In another case, which proved fatal on the twenty-third day, he says the "muscular coat throughout the gullet and stomach presented a dark appearance." Guy states that the epithelial lining of the œsophagus is sometimes detached, leaving a brown surface. These are the only references to such a remarkable appearance in the long list of toxicological authors quoted above. In the cases reported in the medical journals during the past twenty years, however, we find a few instances bearing a strong resemblance to or identical with this case. In the *Lancet* of Oct. 19, 1844, the stomach of a girl 22 years old, who died from the effects of oxalic acid, is described as "blanched and with black spots." In the same journal of Dec. 1, 1855, after a rapid death, the stomach is reported as "black and congested." That our case is not unique may be seen by reference to a plate published in the *Edinburgh Medical Journal* for July, 1861. The striking resemblance to the appearances of the œsophagus and stomach, as hitherto described and as seen in the specimen preserved, will be apparent at a glance. The specimen from which this colored drawing was made was removed from an infant 12 days old, which had died within an hour after a large dose of oxalic acid in solution had been administered by its mother. "The gullet near the cardia was of a deep ashen color," and "the mucous membrane of the stomach generally was of a dark color." Perforation had taken place, as in three other cases on record.

In order to test farther this action of oxalic acid upon the tissues of the stomach and œsophagus, the following experiments were made. On the 8th of April a stomach was removed at an autopsy. It appeared healthy. On the following day a solution of the acid, ʒss. to ℥i. of water, was poured into it and into the œsophagus, which was shut off from the stomach by a ligature. On the 10th, the vessels of the stomach were seen externally to be blackened and the organs darkened, the œsophagus being much darker than the stomach. On the 12th they were opened. The lining membrane of the œsophagus was much darker than that of the stomach. The mucous membrane was everywhere white, but the coats beneath were dark and had a scorched look in places. On subsequent exposure the whole internal surface of the stomach blackened at the tips of the rugæ. This latter circumstance confirms Christison's observation, and is interesting in connection with the fact that the towels and sheet spoken of, in parts where stained by the discharges from the deceased, gradually turned to a dark brown on drying on the tops of the folds exposed to the air. The change was very striking.

April 16th, another stomach was taken from a person dead not twenty-four hours. It was healthy within and without. A solution of oxalic acid one half the strength of the previous solution, gr. xv. to ℥i., was turned into it. On the following day the exterior of the œsophagus was blackened, closely resembling in appearance that in our case. The exterior of the stomach was not at all changed, except the bloodvessels were seen to be darker. On opening it, the mucous membrane of the œsophagus was not so white as in the first specimen. The whole tube, where it had been in contact with the liquid, had a dark-brown or dark slate color. The tissues beneath the lining membrane were not softened. The inside of the stomach was scarcely at all blackened; the mucous membrane was pale. The portion of the duodenum included within the ligature was also not at all blackened inside.

Such are the effects which may be produced upon the tissues after death, and when containing but little blood. For an opportunity of testing its action upon living tissues I am indebted to Dr. Amory, who most kindly furnished the material and assisted in the following experiments at his physiological laboratory.

April 19, ʒss. of oxalic acid in ℥j. of water was injected by a tube into the empty stomach of a large and healthy pup, six weeks old. In a few minutes vomiting began, and was repeated several times. There was no purging. Six hours afterwards there were remaining no symptoms of illness. Section in twenty-four hours after killing showed the stomach and œsophagus pale and healthy; there was nowhere any reddening or blackening of the tissues visible.

At the same time a pup of the same litter, also strong and healthy and in a fasting condition, had injected into the stomach the same quantity of the same solution, the œsophagus being immediately tied just below the pharynx. Immediate attempts to vomit followed, which continued for some time. Death took place in two to four hours. Section twenty-four hours afterwards. The stomach was found inflated by gas. Externally it was reddened in parts, and the bloodvessels of the cardiac portion were visible and of a black color. It contained a dark colored liquid and mucus. The lining membrane was reddened in parts and covered with a dark colored mucus, easily removed by the finger. Near the cardiac orifice it had a dark-brown, scorched appearance, not to be wiped away. The interior of the œsophagus was pale, and generally stained of a dark blackish color. These appearances, as will be seen, closely resemble those presented in the stomach and œsophagus in this case, and strongly confirm the theory that they were produced in the same way.

Blood.—All authors speak of the black color of the blood in the vessels of the stomach, owing to the loca laction of the acid, but Tardieu is the only one who lays any weight upon its condition elsewhere. Christison speaks of its universal fluidity, but the former says, "J'insiste sur une particularité qui ne me parait pas avoir été signalée, c'est la coloration généralement vermeille du sang et de tous les tissus pourvus d'un système capillaire très-apparent. Dr. ——, in his testimony, particularly mentioned the vermillion or reddish hue of the blood. In this connection it is interesting to remember that oxalic acid cannot be detected in the blood, and that if injected into a vessel it is so readily decomposed that it cannot be recognized even after a few minutes.

Conclusions.—From a consideration of all the facts in the case as thus presented, and from information derived from the analysis, experiments, and the observations of others, I am led to the following conclusions:—

1st, That the *symptoms* are those of an irritant-narcotic poison, and closely resemble those produced by oxalic acid; the delay in the appearance of the pain and vomiting as well as the general features of the case indicating that it was administered in a dilute form.

2d, That the *post-mortem appearances* are such as can be accounted for only by the action of a poison; and correspond in their striking peculiarities more closely to those sometimes caused by oxalic acid than by any other known agent.

3d, That the failure to detect other poisons in the tissues and fluids of the body, and the discovery of oxalic acid in a soluble form (and not as oxalate of lime) in matters discharged from the body can, in connection with these symptoms and *post-mortem* appearances, be interpreted only by the theory that death was caused by its administration.

CRITICISM ON "TWO CASES OF DOUBLE SPONTANEOUS DISLOCATION OF THE LENS."

These cases are reported by Dr. H. W. Williams, of Boston, in the number of this Journal for Jan. 6, 1870. I think the treatment in the first case and the diagnosis in the second are open to criticism.

A man, æt. 35, noticed a quivering of the irides when 18 years old. Eighteen months ago the lens of the right eye was dislocated into the anterior chamber, which accident has repeatedly occurred since, "not generally accompanied with pain." When he applied, the lens had been four days in the anterior chamber, "giving him a dull pain in the globe, and causing very slight injection." Dr. Williams reports the vision of the other eye to be one third, using concave six; and for reading, "good." We are not told whether the patient was myopic before the quivering of the irides was noticed; *i. e.* whether the myopia was connected with relaxation or partial rupture of the suspensory ligament of the lens.

Whether the dislocated lens was in its capsule or not is not reported—merely that "it looked like a drop of oil." The lens was got back behind the iris by rubbing the cornea with the lid whilst the patient was on his back in a darkened room. "Three large doses of extract of calabar bean were put into the right eye, producing an evident but slight diminution in the size of the pupil." This did not prevent the lens from tumbling forward again "upon making slight movement." "It is not unlikely that some accommodative effort of the eye may have had an agency in the displacement." How this is possible Dr. Williams does not undertake to say. But if it were, why, then, was the patient "dismissed with directions to put a square of calabar gelatine into the eye every hour," *which would cause constant accommodative effort?* Three large doses had not in an hour shut the pupil enough to hold the lens behind the iris. When there, the lens was not in proper position, it must be noticed, but slipping about; therefore if "a permanent barrier to the escape of the lens into the anterior chamber" *had been* brought about by the calabar bean, the patient's vision would not have been good. Moreover, the extract of calabar bean cannot be continuously applied to the eye even as atropine can. Therefore I hold that the advice to continue its use was not good. As it proved, by "the next day the lens had been several times displaced."

Nothing is said in this report as to the present or future necessity of removing the dislocated lens, or as to the patient's being advised in reference to this point. If this was done, I of course have no further comment; but if not, then I hold it was not good surgery to dismiss the patient without operating or advising it. The whole weight of evidence is in favor of always removing a dislocated lens, especially when it cannot be kept behind the iris. Experience shows it is a "foreign body," likely to produce any trouble, from "a dull pain in the globe with slight injection," as in Dr. Williams's case, within four days, up to ulceration and perforation of the cornea, as was seen by Prof. Graefe; that being the best way nature can extract it. In vol. lxxiv., p. 73, of this JOURNAL, Dr. Williams reports extracting a dislocated lens which was opaque. If this one was left because transparent, I simply say I cannot regard it as good surgery. The ophthalmic journals and text books are full of reports of partial or total displacement of the lens, and experience has fully demonstrated that the sooner a dislocated lens is removed the better for the patient. I forbear tedious quotations from Græfe, the London observers and others.

In the second case, "a boy of about 12, both of whose eyes exhibited partial lateral displacement and slight opacity of the crystalline;" I hold the diagnosis should have been, not "spontaneous dislocation," but *congenital malposition*, as has been often observed. Dr. Williams does not state the amount of the displacement, *i. e.*, whether light entered the eye at one side of the lens, and the mental imbecility of the patient prevented his ascertaining his vision.

B. JOY JEFFRIES.

15 *Chestnut Street.*

A CASE OF TETANUS.

By DANIEL DANA SPEAR, M.D., Kennebunk, Me.

MR. C. was a strong, healthy man, possessed of more than ordinary physical endurance. Early in October, while engaged at labor about his mill, he stepped upon a rusty nail, which pierced his left foot, wounding the external plantar nerve. A small piece of leather was carried before the nail and left within the wound. After the lapse of three days, slight suppuration took place, and the piece of leather was discharged from the wound, which in a few days very kindly healed, and seemed of very trivial importance. In fact, the man kept about his ordinary work, giving it scarcely passing notice.

Ten days from the above occurrence there came on very gradually, first difficulty of deglutition, then pain and stiffness in the back of the neck, and soon partial rigidity of the jaw, which finally became locked. The face was drawn into a painful sardonic smile.

At this juncture of the disease I was summoned to the patient, and first prescribed a cathartic of calomel and jalap, with view of unloading thoroughly the alimentary canal. I then ordered brandy in half ounce doses, as often as each half hour, given in milk, also twenty drops of chloroform in water every two hours.

This treatment was followed for several days, when Dr. Jewett, of South Berwick, a physician of much intelligence, was called in consultation. At his suggestion the chloroform was alternated with the fluid extract of cannabis Indica, in doses at first of twenty drops. During the whole course of treatment no material change was made in the administration of the remedies used. The cannabis Indica was employed in increasing doses, till the maximum dose of a fluid drachm was given each four hours. The treatment was continued above four weeks. The case for some ten days seemed shrouded by uncertainty—the horizon cloudy and dismal. A passing breath of air, the familiar face of well loved friends, an unknown voice, any unanticipated affair, was sufficient to determine a spasm and produce not only trismus but opisthotonos.

The patient was discharged at the end of six weeks, apparently cured. Some two months have intervened without witnessing any return of tetanic symptoms.

With regard to the large doses of the cannabis Indica swallowed by the patient, the object was to bring him under its influence. If a smaller amount would have had the desired effect it would not have been increased beyond that. Whenever these doses were given they gave decided relief. The patient frequently begged for the welcome draught. I do not know what might be the result of other remedies, but it does seem to me that a trial of this in every case should be made, if only for the relief of pain it produces.

The diet of the patient was milk and beef tea. He was allowed to drink of cold water whenever he desired it.

Selected Papers.

LUXATIONS OF THE HIP-JOINT.

[We take the following article from the *Chicago Medical Examiner*. It speaks for itself.]

Mr. Editor :—In a pamphlet* which Professor Gunn has somewhat widely distributed in this vicinity, and which has been brought to my notice since I recently returned from abroad, he makes the following remarks :—

"Professor Bigelow does me great injustice in the manner in which he alludes to my writings; on this subject, he says :—

> "'Professor Gunn maintains, in a paper upon this subject, that any untorn or undissected portion of the capsular ligament is capable of producing the signs of hip and shoulder luxations.'"

This is quoted from a part of my paper intended to do justice to the theories of different writers upon the questions of muscular and capsular resistance in hip dislocation.

I trust that Professor Gunn, for whom I entertain great respect, will acquit me of any intentional act of injustice. The above statement was made upon a careful study of his pamphlet, which I first met with several years after my own theory was made public. In now re-examining Professor Gunn's pamphlet, I see no reason for modifying the statement to which he objects; indeed, his views differ so widely from mine, in respect to the varieties, classification, pathology, and treatment of hip dislocation, and, in fact, as to everything except the general region of the capsule concerned in two of seven regular dislocations, that his pamphlet does not strictly require a reply.

Professor Gunn confines himself chiefly to the question of resistance to reduction in two dislocations, namely, the dorsal and so-called "ischiatic." It may be observed, however, that, of the two dislocations alluded to, he fails to appreciate the character of what he, in common with previous writers, calls the "ischiatic" luxation, which, in the only case he cites (p. 13), was, as he says, primarily dorsal. If it was primarily dorsal, as alleged, Professor Gunn's remarks really refer, not to two luxations, but only to one, namely, the dorsal; because, as the tendon of the obturator internus must have been ruptured, to allow a change of place from the dorsum to the ischiatic notch, the luxation he calls "ischiatic" had no proper claim to be so designated, but was simply dorsal. But the present communication is addressed only to the question of "injustice" to Professor Gunn.

My paper* embraces a general treatise upon hip luxations, of which seven regular varieties are enumerated, four at least being new, and all owing their phenomena, as I believe, chiefly to a single portion of the capsule of the hip, namely, to the ilio-femoral or Y ligament (so called for brevity), in one or both of its branches.

Professor Gunn, on the other hand, recognizing only the four luxations of previous writers, urges that in a paper published in 1853, and subsequently incorporated with other papers in a pamphlet which he now republishes, he had already identified the *anterior and inferior portion* of the capsular ligament as a cause of resistance to reduction in the *dorsal* luxation, and in the (erroneously so called) *ischiatic* luxation. But he fails to add, that he similarly identifies, in the same pamphlet, *another and different part* of the capsule as the cause of the resistance in *other* luxations.

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* Luxations of the Hip and Shoulder Joints, and the Agents which oppose their Reduction. By Moses Gunn, A.M., M.D., Professor of the Principles and Practice of Surgery and Clinical Surgery in Rush Medical College; formerly Professor of Civil and Military Surgery in the University of Michigan. Second Edition. Chicago, 1869.

* The Mechanism of Dislocation and Fracture of the Hip. With the Reduction of the Dislocations by the Flexion Method. By Henry J. Bigelow, M.D., Professor of Surgery and Clinical Surgery in the Medical School of Harvard University; Surgeon of the Mass. Gen. Hospital, etc. Philadelphia, 1869.

Again (to return to this point) : Professor Gunn states, that, in the "dorsal" and so-called "ischiatic" luxations (after the posterior and upper half of the capsule is cut away), the *anterior and inferior half* of the capsule binds down the head of the bone, and opposes its reduction (p. 5).

Professor Gunn here speaks only of two similar and allied luxations—probably only of one—and shows no knowledge of the existence of an ilio-femoral ligament. He also points out, as essential, the resistance of the inferior portion of the capsule, adjoining the obturator foramen, where it is actually thinnest and least capable of resistance to reduction. Indeed, he defines very imperfectly even the "half" of the capsule to which he calls attention. In an account of an experiment in the winter of 1858–9, he says (p. 11), that "the upper and *posterior* half of the capsule was then cut away;" while in reference to other experiments, in 1868–9, he says (p. 18), that "the upper and *outer* portion of the capsular ligament" was removed, at the same time identifying this as "the dissection used in former experiments."

But I am nevertheless ready to concede, that, within these narrow limits, namely, in designating loosely *an anterior capsular resistance in dorsal dislocation*, Professor Gunn is in the main correct and deserving of the credit it was my object to accord to him. He goes further, and, as I think, astray.

He directs, that, "*in the forward dislocation upon the pubes*, while extension and counter-extension is being made in the usual manner" (i. e. by the old method of longitudinal extension), "the limb should be rotated externally; this," he says, "relaxes *the posterior and untorn portion* of the ligament" (p. 20).

I think that Professor Gunn will not contend that this *posterior* portion of the capsular ligament, "untorn," as he says, in the pubic luxation, and therefore to be relaxed by a special position of the limb, is identical with the *anterior* portion, which he has repeatedly before pointed out as "untorn" in the dorsal luxation, and which is to be relaxed, as he states, by a wholly different position of the limb.

It is plain that *two different parts* of the capsule are here referred to by Professor Gunn; and, as these two parts manifestly comprehend the whole, these passages alone are sufficient to show that there is no injustice in attributing to him, in the sentence he has quoted, the theory that "*any*" untorn or undissected portion of the capsular ligament is capable of producing the signs of hip and shoulder luxations.

But in thus refuting the specific charge of Professor Gunn, I have not spoken of the general drift of his whole pamphlet, the conclusions of which are summed up on its last page, and which still further substantiate my expressed conviction. His theory for both hip and shoulder is, that, when the bone passes to one side of the socket, it tears that side of the capsule, and leaves the rest sound, and that the essential resistance to reduction is due to this remaining sound side. This theory is indeed the key note of Professor Gunn's paper, and upon it he bases his system of reduction. In the dorsal dislocation, for example, of which it almost exclusively treats, he considers that because the head of the bone is found upon the dorsum it should be reduced through the dorsal laceration, and reiterates (pp. 13, 14, 16, 18, 20), even in italics, the necessity of *adducting* the limb across the other for this purpose. In his only reported case, he accomplishes this (in his own words, "*arte non vi*"), by a Jarvis's adjuster (p. 13). He says (p. 20), "We further lay down the following special rules:—In the luxation upon the dorsum ilii, the patient lying on his back, carry the limb across its fellow at a point corresponding with the union of the middle with the upper third, rotate inwards, and the pelvis being fixed by an assistant, the head may now be readily drawn into its place."—that is, through the dorsal laceration of the capsule, no matter how inconsiderable this may be. According to my theory, dorsal dislocations are best reduced from below the socket, after the capsular orifice is enlarged if it is constricted, with the thigh flexed at right angles to relax the Y ligament, and sometimes even finally *abducted*.

"In all dislocations," says Professor Gunn, finally, "place the limb in just the position which characterized it at the moment of escape, and the reduction will then be easily effected" (p. 20), a direction which would prove, as I think, sometimes impracticable and sometimes erroneous. Different positions for the different luxations, both of the hip and shoulder, are enumerated in "special" and "general" rules (pp. 19–20)—clearly indicating a belief that in different luxations *different parts of the capsule are torn,* and, as a consequence, that *different parts of the capsule remain,* at once essential to the phenomena, and requiring to be relaxed by wholly different positions, in order to reduce the limb.

My meaning would perhaps have been more exactly rendered by saying, "Professor Gunn maintains, in a paper upon this subject, that *different* [rather than *any*] untorn or undissected portions of the capsular ligament are the essential agents of resistance in the reduction of hip and shoulder luxations."

This doctrine is wholly opposed to my own, which recognizes *the* Y *ligament* as the chief obstacle to reduction, in seven regular dislocations, and directs flexion of the thigh to overcome its resistance.

But upon this point, Professor Gunn, after speaking of the "anterior and inferior portion," or, as he also characterizes it, "half," of the capsular ligament, and its relation to dorsal dislocation, says, "Surely this language includes the so-called Y ligament, unless its author finds also a new location for that structure," thus claiming by implication a knowledge of the pathological functions of the Y ligament. Professor Gunn should remember, that, although the greater may, in one sense, include the less, as a block of marble does a statue, yet that there is no sentence or word in his whole pamphlet which alludes to the existence of an ilio-femoral ligament in the capsule. Inasmuch as this ligament is one of the strongest in the body, "thicker than the ligament of the patella or of the tendo Achillis,"* and is only a part of the literally "undissected" (p. 19) half designated by Professor Gunn as producing the phenomena of dorsal dislocation, it is difficult, in view of this silence, to understand how it could have been in his mind at the time of writing his pamphlet, or why, in common with all other modern surgical writers and authorities, he should have wholly ignored it in this relation till after my paper was published.†

Since the above was written, my attention has been directed to a notice in the Chicago Medical Journal (Oct. 1869, p. 581), reiterating, under the term "unfairness," Professor Gunn's charge of "injustice." The writer says also, "So far as we are able to see, this author [Professor Bigelow] has added nothing to Professor Gunn's exposition of the subject, save only this new name of that portion of the capsular ligament—the anterior and inferior—heretofore known as the ilio-femoral, but which he christens as the Y ligament."

This zealous defender of Professor Gunn obviously possesses one alleged qualification of an impartial critic: he has not read the paper he criticizes. His remarks require notice only so far as they relate to the charge of "unfairness," which I think needs no further comment.

Henry J. Bigelow.

Boston, Nov. 24, 1869.

† Erratum.—The word "published" was here accidentally substituted, in the printed proof, for *made public.* By seeming to refer to the *printing* of my paper in 1869 instead of its *public reading* in 1861 (see p. 10), it does injustice to certain European observations in 1865–8; and on this account I am unwilling to leave it uncorrected. But this is a separate and here wholly incidental question. As far as the passage relates to Prof. Gunn, I believe it to be strictly correct as it stands. I cannot find that he alludes to the ilio-femoral ligament before Sept. 17th, 1869. H. J. B.

Reports of Medical Societies.

OBSTETRICAL SOCIETY OF BOSTON. SECRETARY, DAVID F. LINCOLN, M.D.

Nov. 13th, 1869.—The Society met at the house of Dr. Arnold, at 7½ P.M.; the President, Dr. Buckingham, in the chair.

Dr. Lyman spoke of the death of Dr. Hooker, on the 6th inst., and at the conclusion of his remarks suggested that Dr. Wellington should communicate to the family in writing the sentiments of sympathy felt by this Society.

Dr. Wellington spoke of the intimate nature of his acquaintance with Dr. Hooker, and its uniform pleasantness. He said that Dr. Hooker, in forty years, had had eight thousand cases of midwifery. In East Cambridge no one's loss could be more felt than his; he was looked up to as a father; he had literally no enemies. He was 70 years old, and bore his age remarkably well, going about his daily business until within a few weeks of his death.

Dr. Cotting spoke to the same effect, and desired to second the motion of Dr. Lyman.

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* Traité d'Ostéologie, etc., S. P. Soemmering and G. & E. Weber. Paris, 1843. pp. 323–324.

The President said that it struck him as strange, and honorable alike to the mourners and the dead, that the shops in East Cambridge should have been closed during the funeral services. Nowhere else, except in a little country town, should we expect to see such a general spectacle of mourning for a simple private citizen. He never had heard anybody—not even a physician—say aught against him. He cordially supported the motion, and hoped that some account might be placed on the record of the Society.

The resolution of Dr. Lyman was passed unanimously.

Dr. Arnold related a case of twin-pregnancy, and showed a specimen. Mrs. ——, aged 34 years, in her third pregnancy, had last menstrual flow four months previous to miscarriage. When called, the larger fœtus was found in the vagina, the smaller one in the os tincæ, with membranes unbroken and entirely separated from the other. The larger fœtus was of normal proportions. The smaller—about seven-eighths of an inch in length—eyes, nose and mouth quite distinct—extremities just forming, appeared to be at about the sixth week of fœtal life.

Dr. Read related the following case:—

Mrs. ———, aged 26, has been pregnant thirteen times, but has gone to the full term only three times. One child is living, one lived two or three months, one died just after birth. Soon after impregnation there seems to be set up a *quasi* disease, characterized by dropsy of the abdomen and the lower and upper limbs, pains all over the body, nausea, vomiting, and a darkening of the skin. There is no albuminuria. This condition is never relieved until miscarriage or labor occurs. The last miscarriage occurred on the fifth of August. Patient was by her reckoning about six months pregnant, and for two months had been suffering with the symptoms above mentioned. The os uteri was rigid; so much so that no dilatation that could be brought to bear on it sufficed to overcome it. It felt as if there were fibrous bands in the cervix which prevented it from relaxing. A curved bistoury was introduced along the finger, which could be inserted within the os as far only as the first joint, and its edge turned up during a pain and withdrawn, cutting its way out. This was repeated three times in the same place, and immediately after the last incision the child was born with one pain. The placenta came away directly. Upon examination it was difficult to detect the place where the incision had been made. The only remains of it—more than an inch in length—was a little notch just admitting the finger nail. There was no unusual flowing subsequently. The points of interest in the case were:—1st, the exceptional form of rigidity of the cervix—the result, probably, of undue interference in the earlier miscarriages of the patient. 2d, the instantaneous delivery of the child after the fibrous bands were incised. 3d, the safety of the operation.

The President mentioned a case, already reported elsewhere. The patient had always had severe labors. At the labor in question the os was open to the extent of one and a half inches, and seemed as if surrounded by whipcord. The pains were tremendous, forcing the head and neck of the child outside of the external parts. Fearing rupture, he sent the nurse out of the room for a moment, and made a nick in the edge of the os with his knife. It seemed as if the cut was a yard long; the child was born in an instant; and yet, on putting up his hand after the labor, he felt nothing of the incision just made.

Dr. Read mentioned an instance of the occurrence of milk abscess in a woman six months gone in her first pregnancy.

Dr. Wellington had seen one similar case in a woman three or four months pregnant.

Dr. Cotting had seen the same in a primipara, three months before the full term. The abscess pervaded the whole breast, which subsequently shrivelled and became useless.

The President spoke of the case of an illegitimate child that had lived two or three days denuded of the cuticle. (Previously reported by Dr. B.) In another case, the feet were denuded, and the other parts purple; the child lived twenty-four hours; and the mother afterwards had puerperal mania. There was no trace of syphilis. He also inquired as to the possibility of a previous acute attack of scarlatina in utero. He had never seen a child born with it; but had seen one fully covered with measles at birth, though the mother did not have it; the child lived twenty-four hours.

Dr Read spoke of the way in which knots in the umbilical cord originated during the exit of the child from the uterus.

Dr. Arnold spoke of a woman who miscarried at the fourth month of her first pregnancy, and from that time till her second confinement had enormous and continuous lactation, without having suckled a child.

Dr. Lyman inquired what the practice in this neighborhood was in respect to regulation of diet after confinement. He had found a liberal diet successful, especially in the way of securing a good supply of milk.

Dr. Wellington had always kept his patients on low diet after confinement, until within three or four years past. He had found much advantage in his present practice of allowing more nutritious food.

Dr. Curtis had been led to adopt the plan of giving a nutritious diet, by the unwillingness of his patients to submit to the old method of low diet.

Dr. Cotting had no great fears in giving a pretty full diet. He was accustomed to ask his patients what they wanted, and then to select the milder of the articles named. But he was not afraid, however, of patients starving on corn gruel, if they liked it.

The President remarked as follows:—For a great many years he has given the nurse directions about food immediately after delivery; the woman always has something to eat before he leaves the house. Gruel is given shortly before the close of labor, and directly after. The woman is kept on a good substantial gruel diet until the milk comes; the gruel is made of meal or pounded crackers, and at least as much milk as water. Solid food is seldom given before the milk comes; although he does not see why certain kinds of solid food should do any more harm than the pap cooked over the fire. If the woman had flooded, or has poor blood, she takes as soon as possible after delivery the broth prepared from beef or other meat. The woman who is fed well from the beginning is a better nurse. If she asks for nothing indigestible, he says "Let her have anything she likes, if well cooked. Let her have *salt fish*, if she wants it." Butter that has been melted becomes less digestible in consequence. Some people, during attacks of dyspepsia, have a peculiar ability to digest strange articles of food, which at other times disagree with them.

Dr. Read would agree with Dr. Buckingham in his regimen for lying-in patients, and thought gruel made as described quite as nourishing as meat. It had been his custom to advise his patients to avoid drinking any more than was absolutely necessary for the first days after delivery, and he thought by this he prevented a great pressure of milk into the breast, until such time as the child is able to keep the breasts well drawn.

Dr. Lyman finds that failure of the milk after the second or third month is frequent, but that it is less likely to occur when the mother is well nourished from the first.

The President, speaking of the prejudice against vegetables, as causing "windy milk," said that the sooner the mother takes vegetables the sooner she will have healthy milk.

The Society then adjourned.

Medical and Surgical Journal.

Boston: Thursday, January 27, 1870.

NOTES FROM THE GAZETTE HEBDOMADAIRE.

Copper a Prophylactic of Cholera.—M. Burq, says M. Fonssagrives, has for twenty years striven to establish the triple fact, 1st, of the immunity from cholera enjoyed by workers in copper; 2d, of the prophylactic efficacy of copper employed internally and in small doses; 3d, of the utility of remedies of this category when the disease in question exists. Received with some incredulity, which, however, did not dampen his convictions, the ideas of M. Burq might have been smothered under the prejudice or indifference which obtain as regards questions of preservation from and the treatment of cholera, so difficult, complex and susceptible of doubt, are experiments in prophylaxis and therapeutics. But those ideas deserve to be put on the plane of professional hygiene, if they have as much vitality as their defender has had of perseverance. Now the report made by M. Vernois to the Council of Hygiene, June 25th, 1869, and worked up out of the immense statistical documents collected during 20 years by M. Burq, brings out this truly striking fact, that during the later epidemics of cholera, the mortality of the workers in copper was in the proportion of 3 in 10,000 persons; and that out of 6000 other copper workers (stampers, *repousseurs* and copper-smiths) *not one* appeared in the hospitals in 1865 and 1866 to be treated for cholera, whilst the workers of iron and steel have furnished a cholera contingent of one in 139; and the zinc and lead workers one in 176. The reviewer—M. Fonssagrives—thinks the supposition plausible that the source of the immunity lies in the absorption of particles of copper. Attention is drawn, he says, to the fact of the coppery impregnation of workers of the metal—nothing is wanting to the picture; not even the green color of the hair and beard of those persons. Is this saturation, he asks, a matter of no concern in the premises; and if it should prove to be of significance, would it be the first time that a substance injurious in itself had proved to be, by way of compensation, a source of special immunity? And, furthermore, are we so far advanced in our knowledge of the causes and nature of cholera as to be in a position haughtily to reject a hypothesis supported by such a considerable number of facts? M. Fonssagrives, though he is not acquainted with M. Burq, and has had neither the opportunity nor the means of verifying the latter's trials of the prophylaxis and cure of cholera by copper, does not hesitate to declare that the facts adduced by M. Burq are presented in an eminently scientific form, and furnish a basis of very serious probability. Philosophical prudence prevents the reviewer from going further. But, he would be glad if his testimony should be of any value to M. Burq, who, he says, must in this contest have come in painful contact with more than one *a priori* objection, and who is worthy of respect for having devoted twenty years of his life to an idea.

Cast-Iron Stoves again.—Fonssagrives also calls up once more the question of the insalubrity of cast-iron stoves, and renders a tribute to M. Carret, who has been working at the subject since 1849. His review is worth reporting. He says a new disease prevailing epidemically, attacking by preference sedentary persons, appearing only in winter, undergoing aggravations which coincided with those of the cold weather, characterized symptomatically by prodromata very analogous to those of certain forms of typhoid fever, subsequently by cephalalgia, vertigo, oppression, bloody sputa, smallness of the pulse, persistent disturbances of the nervous and digestive functions—this malady was referred by M. Carret to the prolonged inhalation of carbonic oxide gas disengaged by red-hot cast-iron. The opinion of the author of this theory was from the first combated by chemical arguments, and M. Regnault and Chevreul, with an authority full of menace for the theory of M. Carret, came forward to deny that cast-iron could disengage enough carbonic oxide to produce the symptoms detailed by this distinguished physician. But subsequent experiments conducted by a commission of the Institute composed of MM. Payen, Morin, Fremy, and H. Sainte Claire Deville, sustained the ideas of M. Carret. They demonstrated at the same time the disengagement of carbonic oxide gas by red-hot stoves, and also the permeability of cast-iron by this gas. Now carbonic oxide—that *blood-poison* which kills the red globules, or at least renders them unfit for the exchange of the gases on which their revivification depends—has for a long time given proof of its toxic property. Therefore it cannot enter the head of any one that its habitual and daily inhalation during the whole of the cold season of the year, may be a matter of indifference to the health. Hygiene cannot, any more easily than chemistry, underrate the power of slight causes working with prolonged repetition; and she knows wondrously well that the poisonous agents most to be feared are not those which act with dramatic outburst. Besides, I cannot, says Fonssagrives, too often reiterate, that every time I see a result which is attested by scientific proofs, borrow additional probability from common report, I feel confirmed in my belief in its reality. I believe in the insalubrity of cast-iron stoves from having myself been indebted to them for more than one headache. Though M. Carret, he says, in his earnestness has enlarged the list of the misdeeds wrought by carbonic oxide; whether also this gas be alone responsible for the bad effects produced by the mode of heating in question, or they be due in part to the elevation of temperature and the drying of the air, as M. Coutier contends; however these things may be, one fact is indisputable—cast-iron stoves have made those who have used them pay dear for their economical advantage. The open fireplace, he adds with great truth, has hygiene on its side, because it not only supplies a means of heating, but is a permanent and efficient ventilating apparatus.

In recalling this important subject to our attention, it should be borne in mind that the investigations of Dr. George Derby, in this city, tend to show that the drying of the air has had but little to do with the pernicious effects and disagreeable sensations produced by cast-iron stoves or furnaces.

Chloral—Caution.—Practitioners should be sure of the purity of the article when they use chloral. M. Picot writes to the *Gazette Hebdomadaire* that on using one specimen from a druggist of reputation, the rabbit's ears into which it had been injected suppurated and sloughed off. Six rabbits were experimented upon, and M. Picot finds himself the owner of six earless rabbits.

M. P. sent for another specimen, which differed in appearance from the first; and his rabbits injected with it had no bad symptoms, and *no anæsthesia nor hypnotism.*

LETTER FROM VIENNA.

Mr. Editor,—Within a short time a pamphlet of 110 pages, with illustrations, has been published by Prof. Stricker, in which are given the investigations and experiments carried out in the laboratory during the last year.

I cannot better illustrate the leading principles and ideas which prevail in the scientific labors of this institute than by giving the headings of the different papers.

"Concerning the present State of the Doctrine of Inflammation (an introduction to the following papers). By S. Stricker."

"Experiments upon Inflammation of the Cornea. By William F. Norris and S. Stricker."

"On the Division of Cells in Inflamed Tissues. By S. Stricker."

"On the Relations of Vessels and Nerves to the Process of Inflammation. By S. Stricker."

"On Traumatic Encephalitis. By Dr. Friedrich Jolly."

"Investigations concerning the Furrowing and the Formation of the Laminæ of the Hen's Egg. By Dr. Josef Oellacher."

"On Endogenous Formation of Pus Corpuscles in the Conjunctiva of the Rabbit. By Dr. L. Oser."

"On the Inflammatory Changes of Muscle Fibres. By Dr. Janovitsch Tschainski."

"On the Histological Changes in the Inflamed Liver. By Dr. And. v. Hüttenbreuner."

"Concerning the Reaction of the fixed Cells in the Tail of the Tadpole after mechanical irritation of the same. By E. Klein & H. Kundrat."

"On Inflammation and Suppuration. A *résumé* of the preceding treatises. By S. Stricker."

It will be seen by the above headings that all these investigations refer to inflammation and the formation of cells.

I will quote from the *résumé* of the Professor, in his own words, the conclusions which he has drawn from these experiments.

"That the pus corpuscles spring from different sources."

"That the process of inflammation is accompanied by an increase of certain functions of the cell elements influenced by the process."

"The exudation is an important, perhaps next to the disturbance of nutrition the most important characteristic of inflammation."

"I believe the signification of the exudation must be viewed in a double sense. In the first place, the current acts as a mechanical irritation; and in the second place, the blood as nutrition material has an influence.

"We have a well-grounded right to enumerate the following order of phenomena as characteristic for artificially produced inflammation. Trauma, disturbance of the circulation, exudation of fluid and formed elements, disturbance of nutrition and new formation."

The whole book is the first act of a great scientific enterprise executed according to one systematic plan. The question is:—what is inflammation, and what part do the different constituents of the inflamed organ play?

A number of tissues have been investigated, the circumstances and conditions of the experiments have been varied many fold. Thus by a number of investigators united under one directing head, a great periphery of facts has been described, every point of which leads nearer to the centre of the true future theory of inflammation. And very valuable foundations are already laid.

I address this letter to you in order to bring to the notice of the medical profession in America, a work which cannot fail to be of very great interest.

H. P. Quincy, M.D.

Vienna, Dec. 25, 1869.

Mr. Editor,—Any suggestion that may lead to a great abridgement in the labor now needed in making written memoranda, or in taking notes, is surely of importance. There has just been published a 12mo. volume of some 125 pages, entitled, "The Elements of Tachygraphy. By D. P. Lindsley. Boston: Otis Clapp."

The author of this book had taught the most approved system of short-hand writing for many years, but without the success which he desired. He found that he was by no means alone in his experience. This led him to make the attempt to invent a system in which beauty and clearness should be combined with ease in acquisition. The result will be found in the book spoken of. Not a few persons who had for a long time struggled with the difficulties of mastering some of the old systems of short-hand have testified that they have found in Tachygraphy, after a little practice, what they had sought for in vain in their former efforts. And the writer of this note may perhaps be permitted to testify that a daily practice of more than three years of Mr. Lindsley's system, enables him to add his commendation of it. Respectfully, W. S. B.

Boston, Jan. 24, 1870.

The committee on public charitable institutions sat yesterday morning and heard some interesting evidence in support of the petition for a change of location of the Worcester Insane Hospital. Dr. Bemis, physician of the institution, and Dr. Hooper, one of the trustees, were both examined. They testified to the fact that the present location is in a most thickly settled part of the city, where a good deal of business goes on. It is close to a great public railroad station, which disturbs the quiet and seclusion of the patients. The land has become very valuable, and might, it was stated, be disposed of for half a million of dollars. The petitioners propose to remove the institution to one of two locations, one of which is a mile and the other two miles and a half distant from the city, and to buy 170 acres of land. The explanation simply follows up the arguments urged in the annual reports of this hospital, an abstract of which we have already given. The committee before adjourning signified their intention of viewing the location. Dr. Bemis, at the request of the committee, described the system of the Gheel Lunatic Asylum, which he had visited, and said that the plan is to establish that system, so far as it is applicable to Massachusetts, at Worcester. In reply to a question by one of the committee, he said that he did not think it practicable to have one large central hospital to take the place of all the others. It is a good principle to allow an acre of ground to each inmate, but there is no desirable location in Massachusetts where such a tract of two thousand acres is obtainable. He said that it was the intention at Worcester to build small houses in groups and distribute the patients between them.—*Boston Daily Advertiser.*

In a case of poisoning by carbolic acid, reported at the Philadelphia Hospital Medical Society, the following appearances were found by Dr. Houstoun after death:

Autopsy—Eighteen hours after death, made by Dr. Shapleigh, coroner's physician, at which I assisted. Rigor mortis well marked; evidences of violent counter-irritation on chest and legs. The whole surface of the body was very cold, except on the left side about the cardiac region, where the temperature was markedly elevated. Blood, everywhere dark and fluid, emitting very strongly the carbolic acid odor. Whole venous system greatly congested.

The membranes of the brain were congested, sinuses all filled with dark fluid blood. Along the longitudinal fissures was a subarachnoidal effusion of serum; brain substance not particularly congested; color and firmness about normal; no effusion into ventricles; lips blistered; interior of mouth whitish; tongue white, dry and very hard; pharynx and larynx whitened; œsophagus at upper end whitish and rough, gradually becoming red, until it neared the stomach, where it was brownish.

Stomach contained about eight ounces of a chocolate colored fluid, no undigested food. The mucous membrane was of a chocolate color, roughened and charred, in some places completely destroyed, exposing the muscular layer, and everywhere readily detached. This degree of destruction was chiefly found in the cardiac pouch; near the pylorus it was thickened, and velvety to the touch. This discoloration and destruction continued through the duodenum, fading along the small intestines; the whole alimentary tract was highly congested.

Heart empty and flabby; lungs highly congested; bronchi filled with frothy mucus. Kidneys and liver congested.—*Medical and Surgical Reporter.*

The Staff and Line War.—Admiral Porter, who, as all the world knows, has con-descended to take everything connected with naval affairs under his immediate control, has found a knot worthy of his vindication in the presumptuous claim of certain bodies calling themselves the "naval staff" for recognition of their relative rank on board ship. Navy surgeons, particularly—discontented grumblers that they are—unreasonably complain of their commodious quarters in the ward-room; decry the regulations which forbid a commanding officer from inviting them into the cabin; impudently assert that twenty years' service on their part should entitle them to nearly equal consideration and emolument with those who have served only five years in the line; and appeal to Congress, in a petition very numerously signed by medical landsmen, for an act conferring on them approximate rank—not, however, involving authority to command, but involving the possible attainment of a higher relative grade than lieutenant-commander, with a corresponding increase of pay, and also implying the social recognition of these potion-peddling plebeians by the aristocrats of the quarter-deck.

The indignant surprise of Bumble when Oliver asked for "more" was but a faint foreshadowing of the wrathful stupefaction which seized upon our Admiral at this crowning piece of audacity. What! call upon Congress to intervene, when he had already settled the question to his own satisfaction! The thing was monstrous! But something must be done, and, humiliating as it might appear, these contemptible adversaries must be met with their own weapons; and accordingly a counter-memorial was incontinently framed. To this the signatures of naval men would have been superfluous appendages; for, lo, is not Admiral Porter the representative of the whole navy in his own proper person? Moreover, the few individuals such as Farragut, whom he does not represent, had signified their approval of the "staff-rank" movement. Under these circumstances, and acting on the purely American principle that commercial success affords convincing evidence of superior capacity to decide all vexed questions, whether political, social, or scientific, this counterblast is signed instead by fifty-four merchant princes, bankers, insurance officers and lawyers, who express their deliberate opinion that "any change which may lower the standard of discipline in the navy must necessarily and injuriously react upon the merchant service," and that, since staff officers are "endeavoring to obtain for themselves such rights and privileges as seem calculated to prove detrimental to proper discipline," they (the mercantile memorialists) deem it incumbent on them, "in behalf of the safety and prosperity of our national commerce," to urge "the greatest caution in the introduction of principles into the maritime service which, we apprehend, will be fraught with so much danger to the public welfare."

Did not this *ex-cathedra* statement come from a source of such unquestionable authority, we should never have conceived that the public weal could be imperilled and the commerce of the country overthrown by the mere fact of treating medical officers of the United States Navy with something remotely approaching the social consideration shown to physicians on dry land. The matter may now, however, be regarded as definitely settled, and it would be impertinent for us to say more than to express our sincere hope that Congress will yield to the memorial now before it all the influence which it deserves.—*N. Y. World.*

M. Despres, Surgeon of the Lourcine Hospital, at the last meeting of the Académie de Médecine, read a memoir entitled "An Investigation into some Points of the Anatomy and Physiology of the Cervix Uteri, the Glands of its Mucous Membrane, and a Function of the Cervix unconnected with Delivery." The following are his conclusions:—1. The cervix uteri contains glands distributed in bunches or ramified tubules, having their seat partly in the muscular substance of the uterus, like the prostatic glandules in the midst of muscular fibres. 2. These glands secrete a clear, viscid, albuminous liquid, analogous to the prostatic liquid, which issues from the cervix in an intermittent manner, giving rise to ejaculation on the part of the female. This "uterine liquid" issues slowly from the cervix, remaining within its cavity and at the os uteri. It has hitherto been improperly regarded as a variety of catarrhal fluid. 3. The object of ejaculation in the woman is to furnish a vehicle for the spermatozoa in order to insure their safe arrival within the cavity of the uterus. 4. These glands of the cervix become obliterated during pregnancy, and constitute cysts or Naboth's ovules. But delivery replaces matters as they were by rupturing the cysts during its progress or during the subsequent retraction of the uterus. 5. The cervix of the uterus is erectile, entering into the condition of erection simultaneously with the other erectile female organs, and partially opening to enable the uterine fluid to issue.—*Medical Times and Gazette.*

Dr. Tyler Smith set forth many years ago that it was the union of this uterine discharge with the seminal fluid that constitutes the proper vehicle of the spermatozoa to their fertilizing field.—Ed. B. M. & S. Journal.

FROM a paper read before the New York Medical Journal Association recently, by A. D. Rockwell, M.D., we extract the conclusions drawn from the observation of five hundred cases of disease treated mainly by the method of general electrization :—

1st. The most uniform success was obtained with those diseases that are usually dependent on, or associated with, general debility.

Over three-fourths of the cases of dyspepsia, neuralgia, nervous exhaustion, chorea, hysteria, hypochondriasis, and insomnia, were approximately or absolutely cured, or decidedly benefited.

On the other hand, in chronic rheumatism, hemiplegia, catarrh, epilepsy, &c., the results, though sometimes decided, were yet far less satisfactory. The majority of the cases of neuralgia were of the constitutional variety.

2d. The constitutional and reflex, or peripheric forms of paralysis were, of course, far more amenable to electrization than the central variety of the disease.

3d. In anæsthesia, or paralysis of sensation, the results were far more satisfactory than in paralysis of motion. Of twenty-six cases of anæsthesia, twenty-three were entirely or approximately cured, and in two cases the results were unknown. Many of these cases were of a slight character, and were merely symptomatic of nervous debility.

4th. The results were exceedingly favorable in menstrual irregularities, with which constitutional debility is so often associated, either as a cause or as an effect. Of twenty-one cases of amenorrhœa, dysmenorrhœa, and leucorrhœa, fourteen recovered, or were benefited. None of these symptoms were associated with incurable organic disease. It should be remembered, furthermore, that most of the cases in the table were of an exceedingly chronic character. The majority of cases of dyspepsia, nervous exhaustion, hypochondriasis, &c., had suffered for months and years from their complication of symptoms, and only attempted general electrization as a last resort. Relapses have occurred, thus far, in a small minority of cases. The conditions most likely to relapse, are constipation, hypochondriasis, and rheumatism.

It is, of course, inevitable, that in the process of years, some of those who have been entirely cured of dyspepsia, neuralgia, anæsthesia, menstrual irregularities, &c., must experience renewed attacks. Another important fact in regard to this tabulated statement is, that, in the majority of cases, especially those of a difficult or obscure character, our own diagnosis was confirmed and often preceded by the opinion of the medical authorities who stand highest in New York in their several departments, and by whom the patients were referred to our care. Thus mistakes in diagnosis were guarded against in every way possible.

Mistakes resulting from a complication of treatment were also carefully avoided. Very few of the patients took any other form of treatment, external or internal, while they were using general electrization, and those few, not sufficient to materially affect the result.

It is proper to remark, however, that general electrization may be and is advantageously used, in conjunction with all other forms of tonic treatment, both external and internal.

"RELAPSING FEVER."*—The Medical Officer of the Privy Council has issued a circular on the reappearance of relapsing fever in London. It was absent from 1855 to 1868, but in and after July, 1868, a few cases were received into the Fever Hospital and the German Hospital, Dalston, the patients being chiefly Polish Jews, who had lately come to Whitechapel. The first patient admitted into the Fever Hospital was, nevertheless, an Irish woman living at Whitechapel. It is, however, possible, that she may have caught the infection from some of the recently arrived Jews in the neighborhood. The disease had for some time previous to this date been epidemic in Russia, and was especially prevalent in St. Petersburg when cerebro-spinal meningitis was raging in East Prussia, in which district subsequently typhus, apparently mixed with relapsing fever, extensively prevailed. At first the patients received into hospital here were exclusively Polish Jews—a wretched hungry class—but afterwards the disease seemed to spread more through

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* For a description of the disease see Watson.—Ed. B. M. & S. Journal.

London, chiefly, in all probability, by the agency of tramps, with whom, indeed, the fever is most frequently associated. Up to the evening of Oct. 15, 143 cases had occurred in London. Mr. Simon assures the parochial authorities, that the hospitals, both general and special, have been taxed to their utmost, and that they must not look to them for any further assistance in the reception and management of their sick poor. * * * * *

From inquiries which we have made at different hospitals, it would appear that the rate of mortality in this disease is extremely small, and this may in some measure tend to lay the alarm which has been excited in consequence of the great prevalence this autumn of zymotic diseases. Nor, indeed, does this fever seem to be associated with absolute want, for in only a few of the cases has the cause been traced directly to actual starvation; hence the name of relapsing fever is better than that of famine fever. * * * * * * * —*London Medical Times and Gazette.*

TOOTHACHE AMONGST THE ANCIENTS.—One by one our illusions as to the "good old times" vanish. Long had we cherished an idea that at least decayed teeth were unknown to our hardy ancestors, and were the peculiar privilege of our frivolous civilization. M. Mummery, in an able paper before the Odontological Society, has shown, however, that teeth were at times unsound even when the ancient inhabitants of the British islands lived on coarse meal or the produce of the chase. Mr. Mummery has examined all the ancient skulls within his reach in order to determine this point. * * * * * Mr. Mummery's conclusion is that dental disease is not the exclusive privilege of a high state of civilization.—*Ibid.*

INSANITY IN AMERICA.—By the census of 1860, it appears that there were 23,999 insane persons in the United States and Territories at that date, an increase of 8,389 during the previous decade. Probably there are nearly 30,000 insane persons now. In 1860 there were 40 hospitals for the insane in the States and Territories; and more will be reported in the next census.

These 23,999 insane persons are probably members of nearly that number of families; and stand in ties of endearing relationship to many times that number of kindred; all affected, more or less, with the sorrow that dwells in the homes of the insane. Thus the insane and their sympathizing friends must be counted, in America, by hundreds of thousands.—*Dublin Medical Press and Circular.*

ON THE DETECTION OF FIXED OIL IN PLANTS. By T. T. P. BRUCE WARREN.—The object of this communication was to point out a simple method applicable, on a small scale, to the determination of oils in vegetable juices, &c.

To juice containing caoutchouc, hydrochloric acid is first added, to coagulate it. The residue is treated with bisulphide of carbon, which dissolves out the oily and fatty matter. The addition of dichloride of sulphur causes a granular precipitation in the clear decanted solution.

Fibrous substances are preferably treated with rectified ether, and the caoutchouc, if present, removed by the addition of alcohol, before digesting in bisulphide of carbon.—*Chemical News.*

A VALUABLE library, the property of the late Dr. B. F. Shumard, of St. Louis, has been published by the public school board of that city. It contains many works on geology and palæontology, together with the geological reports of every State in the Union in which such reports have been published.

DEATHS FROM CHLOROFORM.

A CASE occurred at the Middlesex Hospital, Dec. 29, 1870. A man, 26 years old, in good health, save for an abscess on the outer side of his hip, who had previously taken chloroform with impunity, was put under its influence by the chloroformist of the Hospital, for the exploration of a sinus which had been left by the abscess. It was given on folded lint, and "all went smoothly until about five minutes after the commencement of the operation, when the man suddenly ceased to breathe." Only one drachm had been given. Attempts at resuscitation, continued for an hour, were fruitless. The *Medical Times and Gazette* states that "the man was married and leaves a wife and two young children," and naively adds that "it is many years since a similar accident happened in this Hospital."

At the autopsy of the dead man the heart was found fatty and the seat of "somewhat recent endocarditis."—(*Medical Times and Gazette*, Jan. 1, 1870.)

Dr. G. W. J. Swan, a successful physician of North Salem, died recently from an overdose of chloroform administered by himself for relief from suffering.—*Daily Paper.*

Medical Miscellany.

MANAGEMENT OF PERTUSSIS.—In Newark, N. J., most of the physicians send their patients to the purifying room of the Gas Works to spend an hour or two daily, the inhalation of the fumes arising from the gas passing through lime having the effect of moderating and shortening the disease. In cases where it is inconvenient to visit the works, carbonate of lime has been produced therefrom, and placed in vessels about the room in quantities sufficient to impregnate the atmosphere, and has been attended with good results. When access to gas works cannot be had, the hydro-phenil, which, when unpurified, is called benzine, is used as recommended in *Braithwaite;* and the same results obtained as from a residence in the purifying chambers of the Gas Works. Ten or fifteen drops are given in a little water to a child every day, and as soon as it is asleep a few drops are sprinkled on the pillow, so that the smell is diffused throughout the room.—*Trans. Med. Soc. of N. J.*

AN ELECTRICAL INFANT.—There is a wonderful account in all the French papers of an astounding baby just dead, at the age of ten months, at St. Urbain, near Lyons. The strongest medical evidence is said to be given that the child was so highly endowed with electricity that all the persons in the same room with him received constant electric shocks. Its end was apparently painless, but accompanied by still more astounding manifestations. At the instant of death luminous effluvia proceeded, it is affirmed by the doctors, from the body of the child, which continued for several minutes after its decease. The case is supposed to be quite unprecedented in the world of science.—*Medical Times and Gazette.*

IN the Pathological Society, on Dec. 7th, Dr. Murchison exhibited a specimen of impacted gall stones. The symptoms observed during life were repeated attacks of colic, pain, and sickness afterwards, and latterly jaundice. The rupture of the duct caused death. Dr. Pye Smith showed a case of suppuration of the heart, probably caused by syphilis. Mr. Pick showed a tracheotomy tube which had remained two years without removal in a man's trachea. Dr. Leared showed the cancerous lung of a patient admitted into the Great Northern Hospital for phthisis. The upper two-thirds of the right lung were invaded by cancer of the encephaloid kind, and cancer cells were seen in the sputum.—*Medical Press and Circular.*

HYSTERICAL APHONIA.—Dr. Tanner says that he never fails to cure this obstinate nervous disease by means of electro-magnetism. He places the patient in a chair, gives her one handle of the instrument moistened into her hand, and with the other touches the tongue. The patient then screams out violently, and thus convinces herself and friends that she has *not* lost her voice.—*Ibid.*

VAGINISMUS.—Dr. Tilt protests against the necessity of using the knife or scissors in this comparatively common condition. He places the patient under chloroform, separates the two thumbs which are back to back in the vagina, and keeps the vagina distended for five minutes. He then introduces a large metal bougie, and keeps it in a T bandage for several days.—*Ibid.*

TO CORRESPONDENTS.—Communications accepted:—Homicides by Chloroform—Medical Education—Collegiate Agency—Exophthalmos—Contributions to Uterine Surgery.

BOOKS AND PAMPHLETS RECEIVED.—A Physician's Problems. By Charles Elam, M D., M.R.C.P. Boston: Fields, Osgood & Co. 12mo. Pp. 404.—Plastic Operations. A paper read before the New York Academy of Medicine, February 18, 1869. Pp. 8.—Report of the Committee on the Result of Consanguineous Marriages. By Robert Newman, M.D., of New York. Presented to the New York State Medical Society at its Annual Session, February, 1869. Pp. 24.—A Prize Essay on the Medical Activity of the Hemp Plant of North America. By Dr. Horatio C. Wood, Jr., Professor of Botany, University of Pennsylvania. Pp. 8.—Report of the Committee on the Relations of Alcohol to Medicine. By John Bell, M.D., Chairman. Extracted from the Transactions of the American Medical Association. Pp. 120.—First Annual Report of the Children's Hospital, Boston, from its opening, July 19, to Dec. 28, 1869, together with the By-Laws of the Corporation. Pp. 34.—Full-length Portrait of Prof. S. D. Gross, of Philadelphia. From Medical and Surgical Reporter Office.

MARRIED,—At Milford, N. H., 18th inst., L. F. Warner, M.D., of Boston, to Miss Mary M. Gilles, of Circleville, Ohio.

DIED,—At Wilmington, Del., 7th inst., Surgeon Solomon Sharp, U.S.N., in the 64th year of his age.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending Jan. 22, 1870.

Cities and towns.	Number of deaths in each place.	PREVALENT DISEASES Consumption.	Pneumonia.	Typh. Fever.	Scarlet Fever.
Boston	93	10	8	3	5
Worcester . .	13	2	1	1	2
Lowell	20	0	1	2	0
Milford . . .	3	2	0	0	0
Cambridge .	18	3	2	0	1
Salem	8	3	1	0	0
Lawrence . . .	12	2	0	0	0
New Bedford	8	1	0	0	0
Springfield .	4	1	0	0	0
Lynn	15	2	1	1	0
Pittsfield . .	5	0	0	0	0
Gloucester .	7	0	0	2	0
Fitchburg . .	2	0	1	0	0
Taunton . .	6	1	1	0	1
Newburyport	3	0	0	0	0
Fall River .	10	1	0	2	0
Haverhill . .	2	0	0	0	0
	229	28	16	11	9

Cambridge reports four deaths from diphtheria and croup; Lowell four from measles.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending January 22, 93. Males, 48—Females, 45.—Abscess, 1—accident, 1—asthma, 1—congestion of the brain, 2—disease of the brain, 3—bronchitis, 6—burns, 1—cancer, 2—cholera infantum, 1—consumption, 11—convulsions, 4—croup, 2—debility, 5—diarrhœa, 3—diphtheria, 3—dropsy of the brain, 2—erysipelas, 1—scarlet fever, 5—typhoid fever, 3—gastritis, 1—hæmorrhage, 1—disease of the heart, 6—intemperance, 1—congestion of the lungs, 6—inflammation of the lungs, 8—marasmus, 2—measles, 1—old age, 6—pelvic cellulitis, 1—pleurisy, 1—smallpox, 1—syphilis, 1—tympanites, 1—unknown, 3.

Under 5 years of age, 46—between 5 and 20 years, 3—between 20 and 40 years, 12—between 40 and 60 years, 17—above 60 years, 15. Born in the United States, 64—Ireland, 22—other places, 7.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

THE DANGERS AND RESPONSIBILITIES OF A SURGEON.*

By WALTER BURNHAM, M.D., Lowell, Mass.

IN the case for malpractice, of Patrick Moran *vs.* Walter Burnham, tried before the Supreme Court in East Cambridge last week, it appeared in evidence that Moran broke his thigh and leg six or seven inches above and below the knee, from the fall of an elevator.

Dr. Burnham was sent for, but not being in town, Dr. Bancroft, who rented a privilege in his office, went and set the limb with the assistance of Dr. Lovejoy. After this was done and the limb put in splints, Dr. Burnham was again sent for, and came as the other two were about to leave the house. Dr. Burnham was requested to take charge of the case, as they had sent for him first. Dr. Burnham replied that he could not do it: first, because the patient was Dr. Bancroft's; and second, that he, Dr. Burnham, had engagements out of the State for two weeks; and third, he was too sick to do any such kind of business for any one. He was then urged to come the next day and help Dr. Bancroft apply some different splints and bandages, which he had not then at hand. To this Dr. Burnham consented, with the request of Dr. Bancroft. The next day urgent business prevented him from going; but early the next morning he went and assisted Dr. Bancroft in putting on different dressings; using great care in re-adjusting the limb and making accurate measurements. The case was then left in Dr. Bancroft's care, and Dr. Burnham left the city to be absent for one or two weeks on professional engagements. He returned in eight days, and at the request of Dr. Bancroft, went to assist him in putting clean bandages upon the limb. Dr. Burnham did not see the patient again for about eight weeks; but the latter was visited by Dr. Bancroft every day for the first month, and every two or three days afterwards. At the end of two and a half months it was found that the fracture of the thigh had not united. Ten days later, Moran was ordered a starch bandage, and to get upon crutches in order to induce an inflammation in the ends of the bones, after which it was intended again to place the limb in confinement with a hope of effecting a union.

Moran then discharged his attendants, and did not try the starch bandage, but threw off all support, called in two other surgeons, at different times, and after about six weeks went to the Massachusetts General Hospital with his limb about three inches short, although no shortening could be detected while he was under Dr. Bancroft's treatment. At the Massachusetts General Hospital an operation was performed, and in two months union was effected.

With these facts in evidence, the court ruled that Dr. Burnham was responsible for the skilful treatment of Dr. Bancroft throughout the whole time, although he notified Moran that he had engagements out of the State, that it was necessary that the greatest skill should be exercised, and refused to take the case for that reason.

The jury found that in Dr. Bancroft's treatment there was no want of skill, and gave a verdict for the defendant.

It is important to consulting surgeons to know how far the Supreme Court holds them responsible for the skill exercised by the attending surgeon in their absence, not only in fractures but other cases.

In this case, had the jury found unskilful treatment, it would have ruined Dr. Burnham, although he did not have any oversight of the case.

[In reply to a note we took the liberty of addressing to his Honor Judge Ames, we received the following reply.—ED.] :—

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* MR. EDITOR,—I have stated the case as briefly as possible and have the points understood; and report it at the earnest request of a number of the faculty, both in this city and in Boston. * * * *

I am very respectfully, &c.,
WALTER BURNHAM, M.D.
Lowell, Mass., Nov., 1869.

Dear Sir,—I send you a sketch of the only part of my charge in the recent case of Moran *vs.* Burnham, which can be of any interest to the medical profession.

You will please excuse the delay which has occurred, in furnishing an answer to your communication. I am happy to furnish any information that you care to receive, in cases of this kind, but a pressure of business caused me to lay your letter aside for a time.

The verdict, as I suppose you knew, was in favor of the defendant, and it was, in my opinion, a very proper one upon the evidence. Very truly and respectfully yours,

Seth Ames.

The jury had two questions to consider.

1st, Was Dr. Burnham retained and employed by the plaintiff?

2d, If so, was there any want of proper care and skill on his part, in the management or treatment of the case, by which the plaintiff had suffered damage?

The burden of proof was upon the plaintiff, and in order to be entitled to a verdict, he must make out the affirmative upon both of these questions to the reasonable satisfaction of the jury. (So much of the instructions of the Court as relate to the first question is omitted as not being of any general interest.)

With regard to the second question, the rule which should govern the jury is contained in the following propositions:—

A person who publicly seeks employment, and offers to act, for a compensation, in any trade or profession requiring preparation and skill, is bound, when employed by another so to act, to furnish not only ordinary care and diligence, but also ordinary and reasonable skill in his art or business.

The rule in this respect is precisely the same in the case of a physician or surgeon, as in the case of a lawyer, a carpenter, or a jeweller, &c.

The act of publicly offering to render service as a surgeon, for a compensation, for any person who may choose to employ him as such, is a warranty on the part of the person so offering that he has the proper and necessary skill, and that he will exercise that skill with the proper degree of diligence and attention.

To accept employment in such a case is equivalent to giving an express assurance in words, that he has the proper skill, and will exercise it faithfully.

The surgeon is by no means to be understood as giving a warranty that the patient shall get well, or as promising an absolute cure, unless he expressly and in terms so stipulates.

Neither is he to be understood as professing extraordinary and unusual skill, or as claiming uncommon personal endowments or acquirements.

All that the law requires of him is ordinary skill in the particular business which he undertakes, and ordinary and reasonable care and attention in the use of that skill.

The term "ordinary skill and care," is to be understood as meaning such as come up to the usual professional standard of the country and the period.

Bearing these suggestions in mind, the jury are to make up their minds upon the alleged malpractice.

The fact that the operation did not prove successful is by no means decisive of the question.

What did the surgeon in this case do that he ought not to have done? what did he leave undone that he ought to have done? In other words, what was the specific mistake, if there were a mistake? what was the specific oversight or omission of which he was guilty?

It being testified that although the leg had been bandaged and kept in splints, in what some of the witnesses described as apparently a proper manner, and for the usual period, the bone had nevertheless failed to unite—the question for the jury to decide would be, "has this failure to unite been proved to their reasonable satisfaction to have been caused by any unskilfulness, carelessness or mismanagement of the attending surgeon? or was it, on the other hand, one of those cases which sometimes, though only rarely, do happen, in which the bones fail to unite, although the treatment of the case has been exactly according to the common practice, and according to the general understanding of proper practice?"

If the evidence offered left the jury in a state of uncertainty on the subject, so that they cannot say that the malpractice is made out reasonably by a preponderance of proof, it would be their duty to find for the defendant.

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Mr. William Adams has divided subcutaneously the neck of the thigh bone within the capsular ligament, by means of a fine saw. This is a great triumph of subcutaneous surgery, as the case is doing well.—*Medical Press and Circular.*

Selected Papers.

LIQUOR OPII COMPOSITUS.

[Dr. E. R. Squibb has been revising his formula for making *liquor opii compositus.* He omits the ether of his former preparation, partly on account of its disagreeable taste and smell to some persons. He says, in the *American Journal of Pharmacy:*—

* * * All opiates, no matter how made or how used, will disagree with many persons, and with some more than others; whilst that opiate which is best borne by some sensitive persons may be badly borne by others. All opiates will constipate almost all persons under all ordinary circumstances, and will produce a nervous reaction proportionate to the initial action, or at least in proportion to the initial overaction or overdosing. Then as all derivatives of opium must in the nature of things partake of the character of opium somewhat in the relation of cause and effect, it seems most rational to accept together some of those advantages and disadvantages which long observation has shown to be as inseparable as cause and effect, and to seek, rather, by combination with other known agents, or by the subsequent use of corrigents, to remedy the disadvantages in those cases where these are of sufficient importance to demand medication. It is nevertheless now pretty well established, not only that some opiates disagree less than others with sensitive persons, but that some opiates are more generally acceptable and beneficial, and less disturbing than others, and this for reasons of two kinds:—First, by excluding some of the disturbing agencies of the opium; and second, by more or less skilful combinations with corrigents. All that can be safely said of the past career of this liquor opii compositus is that it disagrees with a smaller number of sensitive persons, both in its primary and secondary effects, than most other preparations of opium, and that it is more pleasant in its effects than other preparations of opium, or the salts of morphia, in a very considerable proportion of cases, if not generally.

In the deliberate thought and attention given to this preparation during the past few years in connection with its increasing usefulness, it has sometimes seemed doubtful whether the simple depurated watery solution of opium adjusted by assay, and mixed with one-fifth or one-sixth of its weight of alcohol to preserve it from change, would not be the best practical form in which to offer it for therapeutic application. Such a preparation would be called simply liquor opii, and may be made by the formula to be given. This would leave all attempts to modify, correct or remedy the unpleasant effects of the opiate to the extemporary judgment of the physician, where perhaps they more appropriately belong, because they would be better adapted to individual cases, and would yield a preparation that might be used by hypodermic injection.

This course would be now adopted in the revision of the formula, were it not that the disagreeable taste and smell, and the nauseating effects of opiates, are so objectionable to a large proportion of patients, and that physicians in general are not skilful in the use of corrigents, and therefore not unfrequently fail, or are led into practices which, to say the least, do not always tend to improve the therapeutic action of their remedies—the use of sugar-coated pills, for example. It is therefore mainly to cover the taste and odor of the opiate, to render it more acceptable in delicate conditions of the stomach, and to give it a direction or tendency opposite to that of nausea, that a small proportion of acetic ether and purified chloroform are now introduced into it instead of the compound spirit of ether. If these new ingredients have any important medicinal effect, it will surely be in a direction opposite to the natural nauseating and depressing effects of the opiate, and therefore they are safe, with a reasonable chance of being useful.

Such good effects may well be expected from chloroform, and might be secured if the chloroform could be well introduced in larger proportion, for the following principal reasons, which have led the writer to use it in the formula. Soon after the internal use of chloroform was practised it was found to be sedative and hypnotic, or to have very much the same therapeutic effects now attributed to chloral, and was by some physicians associated with opiates, and particularly with the salts of morphia, with very good results in favorably modifying the action, and controlling the after effects, as nausea, anorexia, headache, depression, &c. It was, however, practically very difficult to get the two substances in solution together within the limits of an ordinary dose without inconvenience from the pungency of the chloroform, and the best results were obtained from the clumsy and inconvenient plan of mixing them with thick syrup or honey. The burning effect of the chloroform upon the mouth, fauces and stomach, though of short duration, was objectionable, and thus the association of the two substances, though proved to be eminently advantageous, never came into general use. It was, however, sufficiently used and appreciated to attract the attention of quackery, and the nostrum called "chlorodyne" was the result. It is often wonderful to see how squeamish and critical physicians and patients are to the disadvantages and inconveniences of legitimate extemporaneous mixtures, which, when served to them in the plausible tone of quackery, lose all their disadvantages, and come out afresh with sensational novelty. Chloroform associated with morphia salts forms the therapeutic basis of the nostrum "chlorodyne," and the extraordinarily incongruous and irrational mixture of molasses, peppermint, capsicum, cannabis, hydrocyanic acid, perchloric acid, and all the others, if there be more, forms a mere vehicle and blind for the attempted secretion of this old and valuable combination. When, however, it came out in this new dress, at the call of the tin trumpet of quackery, many physicians in the very cities where the extemporaneous use of the combination originated became loud in its praise, and their patients found no difficulty in swallowing it at double price. Through the now waning use of this "chlorodyne" and its numerous imitations, many physicians, and some of them without being yet aware of it, have been again taught, on a larger scale, that there is a value in the association of chloroform with their opiates for internal use. But to realize the best effects of this combination the chloroform must be in the proportion of about one fluidrachm to the grain of morphia salt, or about eight or ten minims to the ordinary dose. This makes a mixture which, though not too pungent for many uses, is so rarely needed as to be objectionable for common use.

These considerations led the writer to adopt purified chloroform as an ingredient in the new formula for liquor opii compositus, and a series of experiments was undertaken to determine how much chloroform could be introduced, and still have the solubility or miscibility of the preparation in water secured. This proportion was found to be unexpectedly small, even when the solution was made to consist of one-half its volume of alcohol, thereby taking the character of a tincture rather than a solution. One minim in twenty-five, or one-twenty-fifth of its volume, was found to be the maximum quantity of chloroform which would be permanently held in solution when the twenty-five minims of the preparation was dissolved in one fluidrachm of water or more. This solution when made with a fluidrachm of water was considered a little too near to the boundary line of precipitation of the chloroform, and a little too pungent or biting for common use, and therefore the proportion of chloroform was reduced to one minim in thirty minims of the finished preparation, and the whole formula as finally determined upon was as follows:

Depurated, assayed solution of opium (Equal to one-third of a grain of sulphate of morphia).	14 minims.
Stronger alcohol,	13 minims,
Purified chloroform,	1 minim.
Acetic ether, s. g. 0·880,	2 minims.
Maximum dose,	30 minims.

In the very full dose of 25 minims there will be—

Of the opium solution (equal to about one-quarter of a grain of sulphate of morphia),	11·67	minims,
Stronger alcohol,	10·83	"
Purified chloroform,	·83	"
Acetic ether,	1·67	"
	25·00	"

In the average adult dose of 20 minims there will be—

Of opium solution (equal to about one-fifth of a grain of sulphate of morphia),	9·33	minims,
Stronger alcohol,	8·67	"
Purified chloroform,	·67	"
Acetic ether,	1·33	"
	20·00	"

This preparation, when dropped from a common one-ounce vial, gives about eight hundred and twelve drops to the fluidounce;* or about one and seven-tenths (1·7 drops) drops to the minim. Therefore thirty-four drops is about equal to twenty minims. Thirty drops is perhaps the more common usage as the ordinary adult dose, while twenty-five drops is often sufficient for adult females, or even adult males who are susceptible to opiates.

It is occasionally required in double, or even in three times the maximum dose as above given, and then will of course contain twice or three times the quantities, equal to two-thirds or one and one-third grains of sulphate of morphia. These doses are, however, under ordinary circumstances, poisonous; and it is always best with this, as with all other opiates, to give them in judiciously timed divided doses until the object or indication is *nearly* accomplished, and then stop.

When opiates are given incautiously in large doses, they often seem to meet the indications to their use with a shock or concussion, overwhelming all the powers; and in proportion as this impression is profound and continued, and in proportion as it over-reaches the desired object, in the same proportion is the subsequent reaction, producing depression, anorexia, nausea, headache, constipation, &c. Now in medicine, as in mechanics, it would be irrational to expect to control a reaction independent of control of the initial action, and therefore opiates are not justly chargeable with the results of this not uncommon misuse. On the other hand, however, it is necessary to avoid the very small doses which serve only to stimulate and excite the sensorium ; and therefore no direction for dosing can be given that will be more than usefully suggestive to common sense and good judgment, acting upon a clear conception of just what is required to be done, and how easy it is to overdo this.

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* The first two fluidrachms dropped from full bottle, 190 drops; the second two, 176 drops; the third two, 201 drops; the fourth two, 246 drops.

The plea for assayed preparations in medicine and pharmacy, in order to attain some degree of accuracy and uniformity in therapeutic practice and results, is well illustrated in the instance of opium. It is well understood that hardly any two lumps in a case of ordinary opium yield the same proportion of the useful alkaloids, and that the different lumps have as great a variation as from five per cent. in some, to ten or eleven per cent. in others. It is also well known that by the escape of moisture the proportion of alkaloids is constantly varying until the opium is quite dry. It is also well known that opium is *not* the concrete juice obtained by incision from the unripe heads of Papaver somniferum, but is a varying proportion of this juice mixed with a heterogeneous mass of foreign matter in a more or less solid condition, and that the productive or unproductive seasons, and the variations and speculations in price, have an influence in the yield of the alkaloids and also in the amount of foreign matters admixed. If there be any who believe that the opium of the markets is wholly, or even in greater part, constituted of the juice of the capsule obtained by incision as described by the books, it is only necessary for them to divide the whole number of the population of the part of Asia Minor which produces opium, into the number of pounds which constitute a crop, to prove that it is impossible for any such number of people to collect any such quantities in any such way. It is also known that there are different grades of quality in opium, which *may* be judged by the appearance ; and different grades of quality which *cannot* be judged by the appearance, no matter how expert the judge may be. Crude opium, to be officinal, must contain at least "7 per cent. of morphia." Then this crude opium in drying loses an average of 20 per cent. of moisture. Therefore dried or powdered opium made from crude opium which is just within the officinal minimum limit and no better, will contain 8·75 per cent. of morphia.

The writer has recently seen a small lot of opium that, when dried, yielded a powder containing nearly 15 per cent. of morphia, and knows from actual observation that by appearance, on very critical inspection, it could not be distinguished from another lot which, under the same management, yielded only 12 per cent. ; and yet there was only a difference of about $1.50 or less per pound in the price.

Beside this, opium being a mixture made up for price and profit at the place of production, and being of limited production, but of almost unlimited demand, has of late years assumed the character of a manufacture rather than a natural product ; and its practical standing in the markets to-day in regard to its dilutions and adulterations at the place of original production is not very different from that of woolen goods in regard to shoddy. Hence the better grades of opium, like the better grades of woolens, are produced in comparatively small quantities for the comparatively small demand at higher prices, and these grades, naturally enough, fall into the hands of the makers of morphia salts, where intrinsic value is closely studied in the interests of pecuniary gain.

Again, so localized and so limited is the production of the valuable varieties of opium, and so wide-spread and insatiable the demand for opium—four-fifths of it, at least, being probably consumed as an intoxicant—that a "ring" of speculators could, and did form a "pool" last year, and so controlled the product and the markets as to run the price up to more than double, and during one period to about three times the ordinary cost, and to maintain such prices for nearly the entire crop, with such signal pecuniary success as to warrant the prediction of future similar speculations. Indeed, at this moment opium is again on the rise, with the possibility, if not the probability, that it is again "cornered" by a "ring." All this will probably have the very natural effect of stimulating the production ; but the production will be stimulated in two ways : not only to cultivate more poppies and make more juice, but also to make more opium from the juice—that is, debase it still farther in the manufacture, just as wool is made to go farther when the supply is short of the demand, and the price consequently high.

Now if these statements and deductions be true, and have any value in or any bearing upon medicine and pharmacy, they indicate one thing, and teach one lesson which is optional with us to learn or not, and that is, that the comparatively small portion of opium which is used in legitimate medicine and pharmacy should be used only by assay; and that such opium and its preparations should be, by assay, brought to a definite uniform medicinal strength. But from the variation in the various lumps of opium of the same case it is manifestly impossible, or at least impracticable, to assay it with useful accuracy in the crude moist condition. It must be either dried and powdered, and the powder be assayed, or it must be extracted, and the extract be assayed. Opium, then, is an exception to the rule which teaches all careful physicians and pharmacists never to buy drugs in powder. And yet, unless assayed, it is the most unsafe of all drugs to buy in powder. No plan is so good or so safe as to dry and powder the opium, and then assay the powder by extracting that; because, if carefully dried and powdered without too much heat, the quantity and quality of the useful alkaloids are not materially altered, whilst a large proportion of the useless and embarrassing extractive matter is rendered insoluble in the drying and powdering process. Beside, it is only by drying and powdering that a homogeneous product is obtained, every part of each package of which represents the whole. If a physician or pharmacist buys a pound of powdered opium, the assaying of 150 grains or so of this will indicate the quality of the whole. But if he buys a lump of crude opium and assays any part, or even two or three parts of it, the assay may not, and in all probability will not, represent the whole. He may make the whole lump into a strong tincture or solution by extracting it, and assay a portion of this solution or tincture, with the same ultimate result, but the assay is then less simple and more difficult.

This, then, is the chief, though not the only merit claimed for this liquor opii compositus, that it is made by assay, and therefore of practically uniform strength, entirely independent of the quality of the opium from which it is made.

This process of assay is not a highly critical scientific process which gives account of every tenth, or even every quarter of a per cent. of the useful alkaloids contained in the opium, but the aim is simply to come within one per cent., or thereabout, of the medicinal value and efficacy of different parcels of opium in its power to produce sedation, and to relieve pain in disease. * * *

DR. BURDON SANDERSON ON THE INOCULATION OF TUBERCLE.

There are few men who combine, in a higher degree, the most pre-eminent qualities of physiologist and pathologist with those of the practical physician than does Dr. Burdon Sanderson. Few men could consequently better deal with such a vexed and difficult subject as the inoculation of tubercle. In this respect Dr. Sanderson has amply justified Mr. Simon's selection by the two admirable papers which have been published in that gentleman's annual report on public health. Papers like those of Dr. Sanderson are hard to epitomize; they are full of facts, inferences are scanty, and it would be impossible for us to give our readers even a faint notion of the labors of Dr. Sanderson, or of the processes whereby he reaches the conclusions which we venture to sketch.

The first thing to be noted is that a miliary tubercle is not a mass of shrivelled anatomical elements, as has generally been supposed and taught, but a well-defined structure, consisting of a network of fine fibres, enclosing in its meshes bodies apparently identical with lymph corpuscles, the whole structure closely resembling certain normal constituents of the body. Wherever tubercle is habitually found, in the peritoneum, the spleen, the liver, the lungs, or in lymphatic glands generally, there a tissue, identical with what we have above described, is invariably found as a normal constituent. This peculiar tissue (which Dr. Sanderson terms *adenoid*) is associated in an especial manner with the lymphatics which pervade the system, sometimes forming a distinct sheath round blood-vessels, especially veins; sometimes, as in the lungs, occurring in isolated masses, but always associated with the corporeal aqueducts. Now, it has already been shown by Dr. Wilson Fox and others that active tuberculosis may be set up by the introduction of many kinds of irritants beneath the skins of rodent animals under certain conditions which have not yet been specifically determined; but it has been found that, for the purpose of inciting an artificial growth of tubercle, no plan is better than the introduction of tuberculous matter into the peritoneal cavity. This having been done, tubercular masses speedily arise, but these are no new products—they are simply a hyperplasia of the pre-existing vascular sheaths or other masses of adenoid material normally existing beneath the serous epithelium. When the irritant is introduced beneath the skin, granules or nodules having a texture identical with adenoid tissue elsewhere make their appearance round the site of injury, but these masses cannot yet be shown to be in direct communication with lymphatic vessels. Nevertheless, the next step in the process of infection is the invasion of the lymphatic glands, but only those in the neighborhood which swell up owing to proliferation of lymph cells until the gland becomes a diffluent mass surrounded by a thickened capsule.

Meanwhile other changes have been going on, and the whole system has been, so to speak, poisoned. The lymphoid bodies plentifully found in the lymphatics have made their way into the veins, whence their evil influence is by means of the arteries scattered over the body, thereby exciting to growth the adenoid sheaths surrounding many of the vessels. The proliferating masses round these assume larger dimensions at certain points than at others from projections above the surface, and become miliary tubercles. But we know that tuberculosis does not terminate with the formation of miliary tubercles, the future progress of which may be best illustrated by considering what takes place in the infected lymphatic glands. These seem to be invariably infected in consequence of disease existing whence their afferents spring. Lymphoid cells multiply and fibroid tissue is formed within them, but with the latter comes the beginning of the end. Its meshes become denser and denser, surrounding, compressing, and destroying the capillaries. The necessary supply of blood is thus arrested, and partial death gradually ensues. The glands become caseous.

Such, in brief, would seem to be the process whereby tubercle is spread and the means whereby its evil consequences are brought about, but it need hardly be said that the process varies in different situations. In the liver there is the glandular tissue to consider, in the lung the changes in the alveolar cells, and in both the distribution of the normal adenoid tissue. Nevertheless, it would seem to be shown that the origin of miliary tubercle is in a normal constituent of the body excited to inordinate activity. And this does not depend on Dr. Sanderson's researches alone, but on those of other most careful observers. But the next question is, what are the means whereby these fatal changes are primarily induced? Undoubtedly the inoculation of tubercle itself or of the cheesy matter of tuberculous glands, if that can be called tubercle, under the skin of a guinea-pig, or still more certainly if introduced into the peritoneal cavity of the animal, will in course of time cause general tuberculosis, but then blotting-paper, charpie, gutta-percha, india-rubber, and even a simple injury will do the same. Neither, as at first supposed, is local suppuration necessary to induce general tuberculosis, for tubercle follows when there have been no abscesses. On the other hand, as Dr. Sanderson has shown, setons steeped in carbolic acid have in ten instances been followed by no tubercle. Extensive simple fractures of the scapula have in five instances given no tubercular result. This portion of the subject still needs investigation, and we can only hope that Mr. Simon will be induced to pursue the matter through the medium of Dr. Sanderson. As for the latter, we sincerely thank him for the intellectual feast he has prepared for us, and strongly recommend to our pathologic readers a fuller participation therein than we have been able to afford.—*London Medical Times and Gazette.*

AMERICAN MEDICAL PERIODICALS.

Voilà ce que l'on dit de moi!

[The *London Medical Times and Gazette* for Jan. 8, 1870, has an Editorial on "American Medical Periodicals," from which we make a few extracts of general applicability, leaving the case for some able advocate to show cause, if any, why the sentence should not be admitted to record.]

The average American Journal is lamentably deficient from a scientific point of view; ordinarily it rests far too much on others, far too little on itself. * * * * As a rule American Practitioners are clever and suggestive, ready to strike out new paths in the art of healing, but, probably from their imperfect training, they are rarely skilful penman, and their attempts seldom go beyond the recording of a curious case. But in the great American cities, men are now springing up well educated in every sense of the word, and well fitted to advance the knowledge of our Profession in every way. American Physicians held too long by the brilliant but illusory French writers; now they are turning to the more solid Germans with a corresponding advantage. In another respect most American writers are very shaky—that is, with regard to their pathology, and here it is their writings are most barren; but in this, also, they show signs of improvement, and by-and-by we may expect the vast quantity of material afforded by such a country to be fully utilized.

* * * * One thing is constantly giving rise to discussions in America—that is, their code of ethics. We are inclined to think that too much is said about ethics for very much to be done. * * * * There is a slanginess, a taking after the political press, which renders it, to 'Britishers' at least, unpleasant and unattractive. The frantic efforts made to procure subscribers are another feature which detracts from the weight of many American periodicals. All sorts of inducements but the right ones are held out. We fancy if they did as we do here—secure the best writings of the best men—offers of bonuses and composition fees would not be needed. * * * * Upon the whole, we are hopeful of the condition of the American Medical press; its defects are those which time will remove. * * * * We do believe that the Medical press is increasing in influence, and most deservedly so in America, and we should be glad if a more generous support would enable those who are doubtless both able and willing to turn out a paper which shall vie with, or even excel, its British congeners.

Hospital Reports.

BOSTON CITY HOSPITAL.

Surgical Cases in the Service of Dr. D. W. Cheever.
Reported by George B. Stevens, House Surgeon.

Case I.—*Removal of a Bullet from the Nates after Six Years.*—(Service of Dr. Cheever.)—At the battle of the Wilderdess, while lying upon his belly, the patient was struck by a bullet, which entered on the outer side of the left arm at the upper third, passed obliquely through the limb, then straight down the side of the body, grazing in its course the three or four lower ribs on that side, about two and a half inches to the left of a perpendicular line drawn through the anterior superior spinous process of the ilium, striking the crest of the ilium (as is supposed), and entering the gluteal region in the vicinity of the great trochanter. The humerus was probably fractured, as the patient states that the wound made by the ball remained open for five or six months, occasionally discharging fragments of bone, and that the use of the limb was not regained for a year. The ribs, he was told, were broken, and a deep corrugated cicatrix testifies to the course of the ball. Through the wound made in the gluteal region fragments of bone were discharged, coming probably from a fracture of the ilium.

While in hospital at Washington attempts were made to extract the bullet, but without success; during the six years following the injury the attempts were at various times repeated with the same result. When he entered the City Hospital last November, there were three sinuses in the left gluteal region: one, three inches below, and a little to the left of the anterior superior spine; one, five inches further down the thigh in the same line; and the third about midway between the other two, and just behind the great trochanter.

On the third of December the patient was operated upon by Dr. Cheever. The first two sinuses before mentioned were found to be superficial and to communicate, the probe passing readily from one to the other. The third sinus was deeper, and its direction upwards and towards the median line of the body; at the end of a fistulous track seven inches in length the ball was felt lying loosely upon the sacrum, and was extracted through a counter opening made through the whole thickness of the glutæi muscles. It was found to be a minié ball somewhat flattened, and encrusted with fragments of bone; the portion of the sacrum upon which it was resting was a little roughened. There was no affection of the femur or ilium. The two sinuses on the thigh were connected by a seton; the sinus through which the ball was felt and the counter opening through which it was removed, were treated in the same way.

Following the operation there was no burrowing of pus in the gluteal region. At the end of twelve days the seton connecting the sinuses on the thigh was removed, and at the end of another week the other one also. Four weeks after the operation there was very little discharge, two of the openings had closed, and the remaining two were filled with healthy granulations. So well satisfied was the patient with the result of the operation that at the end of this time he was again, at his own request, taken to the amphitheatre to have a plastic operation done for eversion of the lower eyelid, the result of which, it may be added, has been equally gratifying. During the six years that the patient carried the ball he was a cripple, moving only on crutches, and with a limb wasted, contracted and flattened like hip disease.

Case II.—*Wiring of the lower Jaw for Fracture.*—(Service of Dr. Cheever.)—A vertical fracture of the lower jaw between the two middle incisors was produced by the kick of a horse. During the four days following the injury, while the patient was in the hospital, numerous attempts were made to retain the fragments in apposition by means of wire carried around the teeth, by a gutta percha splint moulded beneath the chin, and the same within the mouth over the teeth, but they were all unsuccessful, as the fragment on the left side could not be kept up on a line with the other. On the fifth day an operation for wiring was done by Dr. Cheever. The lower lip was drawn down, and without any cutting of the soft parts the jaw was drilled with the revolving chisel just below and a little to the outside of the alveolus of the lateral incisor on each side. Through the two holes thus made two pieces of stout copper wire, silver-plated, were passed, and twisted on both the anterior and posterior surfaces of the jaw, as the wire was not sufficiently flexible to allow it to be introduced at one hole, turned on the inner side of the jaw, and then withdrawn through the other. The fragments were thus brought into firm apposition.

Following the operation the fragment on the left side was found to sink a little, but the deformity was more apparent than real, as the teeth were naturally irregular; the line of the gums was good. After the first ten days there was but trifling salivation.

Though the plating entirely disappeared within the first week, the presence of the copper wire was borne with very little inconvenience, and with no toxicological effects, for thirty-three days, when it was removed. The fracture was then firmly united.

Case III.—*Necrosis of the Ulna; Operation.*—(Service of Dr. Cheever.)—Two months before entrance the patient, a feeble woman, aged 43, with phthisical tendencies, had an abscess form on the ulnar side of the left forearm. The incision made for the evacuation of the pus never healed. At the site of the former abscess, when she came to the hospital, was a large sinus through which necrosed bone was to be felt. The patient was in poor condition, and the drain of the discharge was evidently more than she could well bear.

On the third of December an operation was done by Dr. Cheever. Upon enlarging the sinus, the ulna was found to be denuded from a point three inches above the wrist to the vicinity of the elbow joint, where the periosteum again became adherent. Near the wrist the dead bone was easily separated from the sound bone, but at the upper part of the wound the section had to be made with the chain saw; two-thirds of the shaft of the ulna were thus removed. There was but little hæmorrhage, and no ligatures were required. The periosteum was preserved, thickened, vascular, and full of bony plates.

After the operation, granulation went on rapidly in the wound, and the beneficial effects of the removal of the disease were soon apparent. At the end of three weeks, when the patient left the hospital, granulation and contraction were going on most satisfactorily, and her general condition had improved in a wonderful degree. When seen, ten days afterwards, the wound had nearly closed.

Medical and Surgical Journal.

Boston: Thursday, February 3, 1870.

CAUSES OF IDIOCY; HEREDITY; SEX-DIGITISM. COLLATED EXTRACTS.

The *Journal of Psychological Medicine* has a paper by Edward Seguin, M.D., of New York, on Idiocy. He says:—

"This is no place to repeat old surmises, that experience has yet neither accepted nor rejected; but for new facts acquired by recent experience. Persons engaged in the treatment of idiots are nearly unanimous upon the fact that the victims of idiocy grow more numerous. If so, the causes of this infirmity must be on the increase; and what are those now at work?

"Referring idiocy, in the main, to the conditions of uterine life, what recent circumstances have occurred that could have further impaired the woman as a breeder of embryo and fœtus? Her intellectual culture, social and physical gratifications, have fully kept pace with those of her partner. Her relations to the latter are, if anything, more equal and independent than formerly. He, certainly, is less overbearing, less rude and brutal (according to social station), than he was in the good old time. She has more right to her own, and to what he makes, and yet woman is not satisfied. Then, what is the matter? The gist of the matter seems to be:—"Better," said Enfantin and J. S. Mill, "if women would tell it themselves;" that, with more subjects of gratification of mind and body to-day than in the past centuries, women are uneasy, unhappy, because they do not feel themselves adequate to their task. Their education—a jumble of that which has made all the male *inutilities* we have known—has not taught them an iota of womanhood. Their hygiene and habits have disqualified them for motherly functions; city and house narrownesses do not offer more room for a new-comer than their slender pelves; their tastes run toward niceties incompatible with married life; fecundation is the result of maladroitness; its product, unwelcome, ill-fed, ill-treated before as after birth, conceived in apprehension, remains a nervous ruin, or disappears in a storm of some sort. At this spectacle we can sorrow, but not wonder. Can we expect woman to know what she has not learned, or to resent feelings whose warmth never descended into herself? How, besides, can she conceive and nurture, with a living enthusiasm, a child she has no strength to carry, no room to grow, no substance to feed, no idea how it is to be handled, cared for, &c.? The heaviest task when it is not the dearest, she shifts it off, coming out from the struggle with a sad countenance and emaciations foreboding early degeneracy of her vital organism." * * * * *

"No wonder that, from the martyrs of the flat and depressing dramas silently enacted to-day for a miserable livelihood, are born children, not only idiotic and epileptic, but insane. This is a remarkable instance of interpolation of a new link in the chain of adaptation. When pregnant women were simply exposed to home brutalities and privations, their idiotic children were of the simplest types. When the mother had, besides, the mental activity that education and society develop, the idiocy of her child was of a more complex character. But as soon as women assumed the anxieties pertaining to both sexes, they gave birth to children whose like had hardly been met with thirty years ago; insane before their brain could have been deranged by their own exertion; insane, likely, by a reflex action of the nervous exhaustion of their mother." * * *

"We overburden women; they overburden themselves, and choose or accept burdens unfit for them. Besides, their uneasiness results from being moved by several inward currents, neither of them strong enough to cut an open channel through the social obstacles. Among others, is the current toward matrimony, swift sometimes, rarely strong enough to overcome the asperities of a day and night dependence, the heaviest of all; and marriage is that, or a lie. Another current is toward freedom. Being less subjected to animal instincts, and therefore not so easily subdued as women of other ages, heavier fed and less intellectual, those of to-day declare their independence and seek for it. But they do not possess, to the same degree with men, the two elements of it, capital and working capacity; so that most of these protestants against the rule of man are yet reduced to the, so far, only orthodox course—of accepting the means of support from the envied sex. This is a very painful state of transition for both parties, in which men do rarely appear to have received, in feminine money, the equivalent of their would-be liberality; and women suffer from their incapacity of being, one way or the other, neither dependent with contentment, nor free with self-reliance. Children, gotten under such moral and other pressures, cannot truly be said to be born from the union, but rather from the disunion of their parents; conceived in antagonism, they can only be excessive in their tendencies, or monstrous in their organization. This condition of family affairs will last till physiological education shall have fairly developed the tendencies of women; of some for motherhood and matronly station, of others for artistic talents of various grades, which can insure their independence.

"There is nothing new in this position. On the contrary, it is so old that it seems to be entirely forgotten. Nobody seems to remember that once the laws, habits, and religions even, provided not for one class of women only, but for all classes. Such sayings as that of Taney about some men, that some women have no rights that we are bound to respect, is a modern infamy. Let us sooner recall the times of Pericles, when the greatest statesman of Greece was his unmarried friend and adviser, Aspasia, one of the hetairœ of Athens." * * *

Dr. James J. O'Dea, in the same Journal, gives an article on "Hereditary Influence in Mental Diseases." He of course makes use of analogy drawn from physical heredity.

"The influence of sex," he remarks, "is acknowledged by the very highest authorities, among others by Mr. Darwin, from whose work, already mentioned, I take the following remarks on this subject:—'From the various facts recorded by M. Prosper Lucas, Mr. Sedgwick, and others, there can be no doubt that peculiarities first appearing in either sex, though not in any way necessarily or invariably connected with that sex, strongly tend to be transmitted by the offspring of that same sex, but are often transmitted by a latent state through the opposite sex.' In the remarkable papers by Mr. Sedgwick, here referred to, occurs the following illustration of the truth of the above observations:—A boy, aged 14 years, was afflicted with ichthyosis, a disease hereditary in the family for three preceding generations. It first appeared in the grandsire at 7 or 8 years of age. He had three sons and three daughters. One son died aged 5 years and one aged 7, both free from the disease; the third lived, and, though past middle age, had no symptoms of the disease. The three daughters grew up, escaped the disease, and married. Two of them had children; the eldest four. The first-born, a girl, has no sign of the disease; the other three are boys, of whom the eldest, aged 14 years, and the youngest, aged 9, have the disease, while the other son, aged 11, is free from it. The other daughter had three children, the eldest of whom is a girl, and, at the age of 6 years, free from the disease; the other two are boys, aged respectively 3 years and 1 year, and have the disease in a very decided form.

"The principle of sexual limitation can be easily traced in the remarkable history of this family. It equally illustrates the phenomenon of *reversion*, in the non-appearance of the disease in the second generation, and its re-appearance in the third."

Article III. in the same Journal, also, on "*Physical and Moral Transmissions from Parents to Children*," by E. P. LeProhon, of Portland, Me., has the following passage:—

"Thus we see how the perfections and vices of parents, the moral degradations, the monstrosities, the sad and frightful catalogue of numberless diseases, &c. &c., may be transmitted or not; the law of hereditary transmission, in this mode, not being well understood, and being subject to variations without number. Dr. P. Lucas, the author of a learned treatise on this subject, acknowledges that true representation of type comes:—

"1. From both father and mother, which is the direct mode of hereditary transmission;

"2. From the collateral parents, which is the indirect mode of hereditary transmission;

"3. From the ancestors of father and mother, which is called 'atavism,' or transmission of ancestors' resemblance;

"4. From the anterior husband or wife, which is the transmission of hereditary influence.

"The direct mode of transmission is seen everywhere in children, resembling sometimes their father and sometimes their mother.

"The indirect mode is seen with children who possess none of the features and dispositions of their father and mother, but bear a striking resemblance to other contemporaneous relatives.

"Atavism, or transmission of the features of ancestors, is seen in children who do not resemble the authors of their existence, but take their features from their grandparents; this hereditary step, taken from one generation to another, and going back sometimes three or four generations, is more particularly remarkable with mongrels issuing from both black and white races.

"Transmission of hereditary influence is the most extraordinary phenomenon of Nature; the child resembles neither its father nor mother, but takes its resemblance from the man who was the first husband to its mother. A woman is married a second time, say three years after the death of her first husband; she brings forth children resembling her first husband, but bearing no resemblance whatever to the second husband: this is hereditary influence, and an extraordinary phenomenon of Nature, although not so common with mankind as it is with animals. Dr. Harvey, Professor at Aberdeen, unmistakably proves the influence of the first husband over a chaste woman, his influence being transmitted during two or three generations, although the woman may have been subsequently married to other husbands. Other physiologists have observed instances of the same kind happening in some families; and cases are cited where widows, having married a second time, have brought forth children whose resemblance could be traced only to the first husband. Hereditary transmission is evidently based upon authenticated facts, and establishes a law in the organic tissue of living beings."

The "indirect mode" of transmission referred to in the preceding passage would seem to be only the familiar breaking out of hereditary influence here and there in different individuals of the same family tree.

To go back to Dr. O'Dea's paper we find the following passages:—

"Inherited peculiarities may be conveniently arranged under two headings:—1. Those which are congenital and not traceable to any obvious cause. 2. Those not congenital, 'but resulting from changes of functions during the lives of individuals bequeathing them.'—(*Spencer's Biology.*) Out of many recorded examples of the first, or so-called spontaneous, class of variations in the human family, I quote the following, taken by Professor Huxley from a monograph by Réaumur, on the history of a peculiar variation in a Maltese family named Kellia. The father, Gratio, was born with six fingers and six toes on each hand and each foot. When twenty-two years old he married a Maltese lady with the orthodox number of fingers and toes, and had four children by her. What happened? Did the participation of a normal influence in the act of procreation obliterate or merely modify this peculiarity? As the result will show, it only modified it. The first of the four children, Salvator, 'had six fingers and six toes, like his father.' The second, George, 'had five fingers and five toes,' like his mother, one of them deformed. The third, André, had five fingers and five toes quite perfect. The fourth was a girl, Marie, who had five fingers and five toes, but her thumbs were deformed. In due time the children married five-fingered and five-toed people. What was the result? Salvator had four children; two boys, a girl, and another boy. The first two boys and the girl were six-fingered and six-toed like their grandfather; the fourth boy had nothing peculiar. George had four children, two girls with six fingers and six toes, one girl with six fingers and five toes on the right side, and five fingers and five toes on the left side. The last, a boy, had the usual number. André, the third, who was well-formed, had many children, all well developed. Marie had four children:—the first, a boy, had six toes, but the other three were normal.

"This history illustrates three points, viz.:—the so-called spontaneous origin of variations; their tendency to be perpetuated in the offspring, and their modification by fresh accessions of paternal or maternal influences. On this latter account a check is often put to the career of variation, and there occurs a reversion to the normal type.

"We have already understood the second class of variations to be those 'which have resulted from changes of functions during the lives of individuals bequeathing them.'" * * * * *

"The change occurring in foreigners who sojourn in these United States is not confined to the individual's general bearing, but permeates his habits, modes of thought and expression. It is not observed in the lower classes of society only, but, to a greater or less extent, affects persons whose minds have been trained in the schools and imbued with the traditions of the Eastern hemisphere. Mr. Hepworth Dixon devotes a very interesting chapter of his 'New America' to an exposition of the mutual influences exercised by the 'red and white races of the West.' 'No race of men,' he says, 'ever yet drove out another race of men from any country, taking their lands and cities from them, without finding, on the spot which they came to own, a local genius, which affected their polity, their usages, and their arts.' Such was the fate of the Romans after the conquest of Greece, of the Normans after the conquest of England, of the Franks after the conquest of Gaul, of the English after the conquest of Ireland. 'More Irish than than the Irish themselves' is a term still applicable with all its wonted force to Englishmen who settle on the soil of the Emerald Isle.

"Let me select one more example of the tendency of induced changes in the parent to transmit hereditary predisposition to the offspring:—'Some few years since Dr. Brown-Séquard, in the course of inquiries into the nature and cause of epilepsy, hit on a method by which epilepsy could be originated. Guinea-pigs were the creatures on which, chiefly, he experimented; and, eventually, he discovered the remarkable fact that the young of these epileptic guinea-pigs were epileptic; the functionally-established epilepsy in the parents became constitutional epilepsy in the offspring.'—(*Spencer's Biology.*)"

We open the February number of *Old and New*, and there find *sex-digitism* again, illustrated by the investigations of Prof. Burt G. Wilder. The *hereditary transmission* of this peculiarity naturally passes in review. Dr. Wilder writes thus:—

"We come now to the second part of the inquiry, the extent to which the tendency to sexdigitism prevails in families. I refrain from giving some very interesting cases of American families, and quote instead from a most instructive one detailed by Dr. Struthers, who was the first to undertake a systematic study of these anomalies.

"The great-great-grandmother, Esther P—— (who married A. L——), had a sixth little finger on one hand. Of their eighteen children (twelve daughters and six sons), only one (Charles) is known to have had digital variety. We have the history of three of the sons, Andrew, Charles, and James.

"(1.) Andrew had two sons, Thomas and Andrew; and Thomas had two sons; all without digital variety.

"(2.) James, who was normal, had two sons and seven daughters, also normal. One of two daughters became Mrs. J——, and had three daughters and five sons, all normal except one son, James J——, who had six fingers on each hand.

"(3.) Charles, the only son of Esther who had digital variety, had six fingers on each hand. He had three sons, James, Thomas, and John, all of whom were born with six fingers on each hand, while John has also a sixth toe on one foot; all were amputated. His nine other children were all normal: so also were their children and their grandchildren. So also were the children of James and Thomas, and the latter's grandchildren.

"(4.) But John has a son who is normal and whose children also are normal. John's daughter Jane was born with six fingers on each hand and six toes on each foot."

"This case illustrates all the more important features of hereditary transmission.

[An examination of it shows us the special influence of *sex* as referred to by Dr. O'Dea. Ed.]

"1st. The simple tendency to *transmit* the same peculiarity from parent to child; as from Charles L—— to his two sons, James and Thomas.

"2d. The tendency to *intermit;* or to a *reversion* to the normal form; the peculiarity passing over one or more generations, to reappear in a more distant one; as with James L——, and his daughter Mrs. J——, and her son James.

"3d. The tendency to *increase* the extent of the peculiarity in successive generations, in spite of the union of sexdigitists with ordinary five-fingered individuals. Esther P—— had a sixth little finger upon one hand; her son Charles L—— had it upon both hands; his son John had a sixth toe in addition; while his daughter Jane had six fingers upon each hand and six toes upon each foot.

"4th. We notice the persistence of hereditary transmission in spite of surgical interference, even during the infancy of the person affected, as in the case of John's daughter Jane. Removal of the extra digit generally relieves the subject (although not always permanently), but does not seem to prevent the reappearance of the peculiarity in succeeding generations. It is known also that the tails of cats and dogs and horses have been "docked" for many generations without diminishing those of their offspring. This whole subject is a very curious one, and leads us naturally to speculate as to the possible moral, mental, and physical agencies which can produce a peculiarity which comes and goes, appears, disappears, and reappears in a manner inexplicable upon any other grounds than the known tendency of all natural physical characteristics to be transmitted through successive generations.

"It may well be asked: How do these facts bear upon the theory of the origin and transmutation of species? especially since Darwin has collected quite a number of cases, and evidently regards them as favorable to his opinions.

"Now it cannot be denied that sexdigitism not only runs in human families to a wonderful extent, but is even more persistent among some of the lower animals, as the cats for instance which, in domestication at least, are known to inherit and to transmit it through many generations. Nor do the extra claws seem to incommode them at all, but rather to make them better climbers, and better able to handle a mouse; and yet there is no evidence that the six-toed variety is becoming more numerous than the ordinary species.

"And even if the peculiarity should persist for a hundred generations, would that make a new species, in any sense of the word? would the rest of the structure change at all? and should we not have to regard the variety as a remarkable persistent and harmless monstrosity which, if admitted to be specific, would give us a species differing from all other members of its genus, family, order, and even class, and ranking, as to the number of its digits, below the reptiles and the birds, among the many-rayed fishes? And are we not justified in assuming that all other individual variations which may be perpetuated, are really only monstrosities which are wholly insufficient to constitute a species until accompanied with decided and general modifications of structure, such as are not yet proved to exist? In short, may we not admit all the *facts*, without being convinced that they prove the origin of species by variation from any cause?"

We think this a fair sample of the flimsy basis of facts on which rests what is called Darwinism—a notion which makes a wasteful squanderer of the Great Economist who converts decay itself into the flower and the fruit, and who has carefully stored away the boundless vegetation of a past geological period for the daily and manifold uses of the current centuries; a hypothesis which ascribes a bungling workmanship to the Intelligence whose skill contrived the human hand, and with mathematical precision bends the ray of light through cunningly arranged refracting media upon the retina of the eye.

The principal points in the remainder of Dr. Wilder's contribution to *Old and New* have been previously laid by him before the profession among the publications of the Massachusetts Medical Society, except that he has now accumulated over two hundred cases, whereas in 1868 one hundred and fifty-two was the number of instances he had reached. The number fully recorded and tabulated is the same in the two papers.

We have received the first Annual Report of the Children's Hospital, from its opening, July 19, to December 28, 1869; together with the By-Laws of the Corporation. The following is the report of the Medical Staff:

The first patient was received in the Hospital on the 20th July, and since that time to this date there have been

Received and treated—30 patients.
16 males; 14 females.
12 medical; 18 surgical.

The result of treatment has been as follows:—

Discharged well	8
Discharged relieved . . .	2
Discharged not relieved . .	3
Discharged not treated . .	3
Remaining	14
	— 30

There have been no deaths.

Two patients were removed from Hospital within a day or two, by their parents, contrary to advice.

Of the surgical cases, there have been some excellent results; no doubt there will be, at some future time, special reports, which will embrace the unfavorable as well as the favorable cases.

Of the medical cases, there were *three*, whose condition, upon admission, would have warranted any one, however sagacious and skilful, to prognosticate a fatal result, and that within days, if not hours. This is mentioned because it affords a reasonable belief that their restoration is to be attributed to the kindly and untiring judiciousness of their nursing.

Some cases, of course, require more care and attention than others; all have received the care they have needed, and all have seemed to be contented and happy.

For the Medical Staff,
Wm. Ingalls, *Sec'y.*

Mr. Editor:—Will you please notice in your Journal, with regard to the recent sudden death at the Massachusetts Charitable Eye and Ear Infirmary, and which was rumored to have been caused by the inhalation of sulphuric ether, that the death took place *nine days* after the etherization; that the patient came out of the ether perfectly so far as coming to her senses is concerned, although from weakness she preferred to keep her bed for several days; that she was sitting up on the fifth day.

The patient was a widow, aged 74 years. She entered the Infirmary to be operated on for mature cataract of the right eye, there being also commencing cataract in the left. She was of a pale, sallow complexion and feeble appearance, and yet she did not seem to me sufficiently sick to be unfit for the operation. She had applied at the Infirmary for advice some weeks before her entrance for the operation. I do not remember that she spoke of any thoracic symptoms before admission.

The operation took place Dec. 31, 1869, without accident of any kind, but with the interesting ophthalmological feature that the pupil could not be well dilated by atropine before the operation, and that the capsule was distinctly felt when divided, and was seen after pressing out a rather small lens-nucleus, and was then drawn out easily with a fine forceps and without losing any vitreous.

Jan. 5, 1870. Bandage omitted yesterday. Eye doing well, except rather more red than desirable.

To-day patient sitting up. Has had some disagreeable sensations in chest; was supposed to have taken cold; some cough. Had mustard applied last night to chest.

Jan. 8. Sitting up. A small spot like purpura noticed on left cheek.

Jan. 9. Was sitting up in the forenoon. Spoke of a pain down one of the arms. Looked feeble. Pulse rather strong and full. For several days her food had not relished; did not suit her. I supposed her homesick, and thought of advising her to go home.

She had been sitting up for some time when the fatal attack occurred; death ensued almost instantly, within the course of a few minutes.

It is to be regretted that an autopsy was not made. Arrangements were made on the part of the friends for having the remains taken to a neighboring city, and it was not thought advisable to postpone the removal sufficiently for an examination.

Boston, January, 1870. G. HAY.

COMA, FROM NITROUS OXIDE. By Prof. T. GAILLARD THOMAS, at Bellevue Hospital, Dec. 11th, 1869.—E. McL., 19, domestic, Ireland, three years in America; was admitted to Hospital December 10th. She was in perfect health up to Tuesday, December 7th, when she took nitrous oxide, from the hands of a dentist, previous to having a tooth pulled. She has been comatose ever since, says there is nothing the matter, but has a distinct remembrance that she had or was about to have a tooth removed, and, from repeated exclamations of "my tooth," seems yet to suffer from it. In answer to questions as to where she is, she replies "at my mother's." She presents a robust appearance, remains quiet, with a constant tendency to lapse into unconsciousness, from which a considerable amount of shaking is necessary to arouse her. Questions have to be repeated, and elicit imperfect and unsatisfactory answers. The pulse is perfectly natural. She had double strabismus, which has now disappeared. The face gave the impression of being flushed; but she seemed naturally florid.

Treatment:—let her alone until she recovers. I have known a case in which the coma lasted four days.

[This patient went out perfectly well a few days afterwards.]—*New York Medical Gazette.*

PTYALISM AS A SYMPTOM OF SYPHILIS. By HENRY LEE, Surgeon to the St. George's Hospital.—A gentleman had well-marked constitutional syphilis. When I saw him he had not taken a grain of mercury. He was greatly distressed by a copious and constant discharge of saliva from the mouth; this was so great that it glued his whiskers every night to the pillow-case. The gums were red and inflamed, but not very tender or ulcerated. This state of things continued over some weeks without any mercury being administered.

A medical man had constitutional syphilis. He had used no mercury in any form, except an ointment which he occasionally applied to his hair, and which contained a very small quantity. In October, 1868, this gentleman wrote to me, "I don't know what could loosen my teeth and inflame my gums so much. I could not have been cold, as the weather has been so fine."

Another patient of mine whom I have seen for many months has lately had a severe attack of inflammation of the gums, with a very considerable increase in the secretion of the saliva, without having taken any mercury for upwards of a year. In this case there was, in addition, ulceration of the throat, which was not present in the other cases.—*Medical Press and Circular.*

MR. ACTON ON PROSTITUTION. * * * We have now done with Mr. Acton, not that we have exhausted the subject matter of his admirable volume of painstaking research, but because we wish to say a word on our own account. Whether or not State intervention be desirable in the regulation of prostitution, we maintain that the chief hope of amelioration lies in an improved moral tone of society, which must commence in its higher strata. There was a time in the memory of many of us when intemperance was a leading vice of the age. We have lived to see the day when, the drawing-room being purified, drunkenness has become less prevalent among the lower orders of the people. Virtues and vices have both a tendency to gravitation. Is it too much to expect that the virtue of male chastity throughout our population may be promoted and extended by means similar to those which have succeeded in making us now a comparatively temperate people? Is it too much to ask that the leaders of female society in the metropolis should make a beginning in this direction? that they should refuse admission into their *salons* of the notorious profligate or seducer, just as they would to the same man if he intruded his presence when debased by indulgence in the bottle? that they should extend their disgust of the drunkard to the man whom they know to be living a sexually immoral life? Till this is done, till the axe is laid to the root of the tree, we have little hope of destroying the vicious trunk by the mere lopping off of its branches.—*Medical Times and Gazette.*

Medical Miscellany.

THE HEART TRANSFIXED BY A NEEDLE.—Prof. Biffi, at a meeting of the Milan Institute, presented the heart of a lunatic who had died in consequence of gangrene of the tongue which had supervened upon a bite which he had inflicted upon it during a maniacal paroxysm. At the autopsy a needle six centimetres in length was found in the left ventricle, its point, after perforating the valve, penetrating to the extent of one centimetre and a half into the left auricle. On inquiry being made, it was ascertained that the lunatic, twenty-two months prior to his death, had announced to his relatives that he had forced a needle into his heart; but little attention was paid to his statement, especially as no symptoms of any disorder in the chest manifested themselves, the pulse during all this time, too, being quite regular in its beats. Full details of the case are shortly to be published.—*Gaz. Med. Italiana-Lombardia*, Oct. 16.

A NEW MEDICAL SOCIETY IN THE DISTRICT OF COLUMBIA.—A new Medical Society was recently formed in the District of Columbia. The occasion was the refusal of the old medical organization of the District to receive into membership two applicants, against whom no objection was urged on account of lack of qualifications—but simply, that they were negroes. As that objection cannot hold many years longer, it would have been wiser if the old society had admitted them.

Dr. Robert Reyburn was chosen President, and Dr. Gray, Secretary. A committee was appointed to draft a constitution and by-laws. In defining their status as practitioners, they had much better have omitted the term "so-called allopathic." We believe it was Dr. Charles J. B. Williams, of London, who introduced the term "practitioners of legitimate medicine," to represent the members of our profession in contradistinction from all classes of irregular doctors.—*Medical and Surgical Reporter.*

NEW CLAMP FOR HÆMORRHOIDS.—Mr. Sydney Jones, feeling how unequally the clamps in present use press on all parts of the pile to be removed, has devised an instrument in which the bars act in a perfectly parallel direction. This parallel action of the blades is effected by placing the joint-screw at right angles to the blades. A scooping action is at the same time secured, so that the deepest part of the pile is seized and drawn forwards. On the upper surface the blades are sloped, so as to make their line of closure project beyond the general level. By this arrangement the removal of the pile by scissors can be more readily effected. The rack and screw for fixing the handles play very easily; the rack is curved, and, instead of being fixed, has vertical and horizontal movements. Of course, in the use of this clamp the ordinary curved scissors would not have availed; their shape has been modified to adapt them to the curve of the clamp. The principle has been admirably carried out by Messrs. Schmidt and Robinson, of 267 Strand.—*London Medical Times and Gazette.*

DIGITALIS AS A REMEDY.—Withering, in the year 1775, brought to the special notice of the profession the remedial powers of digitalis, in the successful treatment of dropsy.—*Med. Record.*

TO CORRESPONDENTS.—Communications accepted:—Norfolk District Medical Society Records—"Will it Pass?"—Review of Book by Salomons—City Hospital Report—Cases of Diphtheria.

ERRATA.—In the JOURNAL of Jan. 27, page 69, first column, twenty-first line from the bottom, for "salt fish" read *fresh fish*.—In the same issue, page 75, 2d column, twenty-fourth line from top, for "published" read *purchased*.

BOOKS AND PAMPHLETS RECEIVED.—Clinical Lectures on the Principles and Practice of Medicine. By John Hughes Bennett, M.D., F.R.S.E. Fifth American, from the Fourth London Edition. With 537 Illustrations on Wood. New York: William Wood & Co. Pp. 1022.—Personal Beauty: How to cultivate and preserve it in accordance with the Laws of Health. By D. G. Brinton, M.D., and George H. Napheys, M.D., Philadelphia. Pp. 346.—Specimen pages of the Medical Adviser; A full and plain Treatise on the Theory and Practice of Medicine, especially adapted to Family Use. By Rezin Thompson, M.D., Cincinnati, Ohio.—Sixteenth Annual Report of the Trustees of the State Lunatic Hospital at Taunton, Mass. Pp. 34.

Deaths in nineteen Cities and Towns of Massachusetts for the week ending Jan. 29, 1870.

Cities and towns.	Number of deaths in each place.	PREVALENT DISEASES.		
		Consumption.	Pneumonia.	Scarlet Fever.
Boston	127	30	9	11
Charlestown	13	1	2	0
Worcester . .	14	2	2	1
Lowell	21	2	1	1
Milford . . .	1	0	0	1
Chelsea . . .	10	1	3	0
Cambridge .	13	1	0	1
Salem	8	1	2	1
Lawrence . . .	8	3	0	0
Springfield .	5	1	0	0
Lynn	9	2	0	0
Pittsfield . .	1	1	0	0
Gloucester .	3	2	0	0
Fitchburg . .	1	0	0	0
Taunton . .	9	1	0	5
Newburyport	2	0	0	0
Somerville .	3	0	0	0
Fall River .	7	0	1	0
Haverhill . .	6	2	1	0
	261	50	21	21

Boston reports two deaths from smallpox. Lowell reports two deaths from measles. From all the above places there are reported six deaths from typhoid fever, eight from croup and diphtheria, and four from whooping cough.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending January 29, 127. Males, 71—Females, 56.—Accident, 2—anæmia, 1—apoplexy, 6—inflammation of the bowels, 1—disease of the brain, 4—inflammation of the brain, 1—bronchitis, 3—burns, 1—cancer, 1—consumption, 30—convulsions, 1—croup, 4—cyanosis, 1—debility, 3—diabetes, 1—diarrhœa, 3—diphtheria, 1—dropsy of the brain, 2—scarlet fever, 11—typhoid fever, 2—hæmorrhage, 2—disease of the heart, 2—infantile disease, 4—disease of the kidneys, 3—disease of the liver, 1—congestion of the lungs, 4—inflammation of the lungs, 9—marasmus, 4—measles, 1—old age, 4—peritonitis, 1—premature birth, 1—puerperal disease, 3—rheumatism, 1—smallpox, 2—spina bifida, 1—suicide, 2—tumor, 1—unknown, 2.

Under 5 years of age, 48—between 5 and 20 years, 9—between 20 and 40 years, 34—between 40 and 60 years, 20—above 60 years, 16. Born in the United States, 92—Ireland, 20—other places, 15.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

NEW SERIES.] THURSDAY, FEBRUARY 10, 1870. [VOL. V.—No. 6.

Original Communications.

OBSERVATIONS ON TUBERCLE.

Read before the Boston Society for Medical Improvement, January 10th, 1870, by Dr. J. B. S. JACKSON.

THE subject of tubercle has several times been alluded to before the Society, of late, and I propose to give some of the impressions that I have received in regard to the disease from the dissections that I have made in former years; with some reference to the opinions of others, but avoiding many questions that have been much discussed, and probably always will be by those who have a taste for such investigations.

Tubercle, as it has been generally understood since the time of Laennec, and until the last few years, appears in the lungs under different forms. First, there is the opaque form. Secondly, there is what may be called the gray granulation. Thirdly, there is an infiltration of the lung, apparently, by a gray deposit. And, lastly, there is the miliary tubercle.

With the first we are but too familiar; scarcely a case of phthisis being examined without more or less of the deposit being seen. The gray granulation, which comes next in frequency, is about the size of a turnip seed, has a degree of translucency that suggests the idea of the flesh of some kind of uncooked fish, a semi-cartilaginous hardness, and is often said to feel like shot between the thumb and finger, inasmuch as the pulmonary tissue immediately about it is generally perfectly healthy and of course yielding. Its surface is smooth and shining, so that it contrasts with the comparatively rough as well as dead look of the opaque deposit. These two first forms of tubercle are almost invariably seen together in the adult, though I have occasionally met with the opaque form alone in children. The gray granulation is essentially a chronic disease; and a similar, though much smaller and more transparent deposit is occasionally seen upon the pleura and peritoneum, but very seldom if ever in any other organ than the lungs. This form of deposit is not referred to, so far as I see, by Niemeyer.

The third variety seems to be common enough in Europe, and yet I have scarcely ever met with it. A considerable portion of one of the lobes is condensed, of a grayish color, smooth and somewhat shining upon the cut surface; looking, in fact, not unlike the granulation in structure, though very different in form. A soft variety of grayish infiltration seems not to be rare in Europe, and is compared by Niemeyer to frog's spawn, but I have never seen a case of it.

The miliary tubercle is of frequent occurrence, as compared with the gray infiltration, but quite rare as compared with the granulation. I do not remember ever to have seen it in a common case of phthisis, or as a chronic disease, though there may be associated with it the remains of a former tubercular deposit in the lungs or bronchial glands. It is always an acute affection, so far as I have seen it; and, if the deposit that is often seen beneath the peritoneum and corresponding to an intestinal ulcer is to be excepted, I do not see how the two are to be identified as the same formation. It is decidedly smaller than the granulation, less dense, and less translucent; but its chief characteristic is that the lungs are perfectly crowded with the deposits from apex to base, though they are most abundant and opaque at the apex. They are nowhere, perhaps, a fourth of an inch apart, and yet they are perfectly distinct; whereas the gray granulations not unfrequently coalesce. As the pulmonary tissue, also, about these last is healthy, excepting, of course, the opaque tubercular deposit, it is more or less congested in the case of the miliary, and has often a somewhat fleshy feel, that strongly suggests the idea of inflammation; and yet there is no pleurisy. It runs a course of two weeks or more, and without any very marked local symptoms, excepting a rapidity of respiration, and perhaps some lividity; but often with such constitutional symptoms as lead to the suspicion of typhoid fever. It is also very frequently met with in cases of tubercular meningitis—a disease that, it is well known, occasionally simulates fever; and, as the attack sometimes comes on when the subject is apparently in perfect health, I have supposed that the pulmonary disease dated no further back than the meningeal. The deposit in the membranes, though considerably smaller, resembles sufficiently that in the lungs to make it probable that the two are essentially similar; and I suppose that in the membranes it precedes the meningitis, as I have, once at least, found it where there was no inflammation. If such is the case, the amount of inflammation that is excited in the membranes is very remarkable as compared with what we see in and about the lungs. Niemeyer, who gives an excellent account of this form of tubercle in his work on Practical Medicine, says that in most cases of the acute disease the peritoneum, liver, spleen, and kidneys, "are covered by miliary tubercles;" but, excepting a few scattering, whitish opaque, indefinite and very minute deposits occasionally in the liver and kidneys, I have found the disease confined to the lungs, unless the membranes of the brain were affected.

A vast many pathological questions, however interesting scientifically, are of no practical value; but it is not so with the question as to the nature of tubercle. The alliance of this product to some form of inflammation has often been suggested and sometimes urged; and within the last few years Niemeyer has particularly distinguished himself by maintaining the idea that there is but one form of true tubercle—the miliary; and that all the others that have been described are only different forms of pneumonia. "In very many cases," he says, "there is not a single tubercle in phthisical lungs." The common, opaque, tubercular deposit, resembles very strikingly what we see in the case of gray hepatization; and I cannot look back to the time when I did not consider them allied; it being sometimes, if not often, impossible to distinguish them if a small isolated portion only is taken; and, as a good illustration, I would mention a case that occurred at Guy's Hospital in the winter of 1830–1. A case of well-marked acute pneumonia was being examined when Dr. Bright came into the room, saw the gray hepatization, and, knowing nothing whatever of the case, spoke of it as a tubercular disease; and he would not allow his mistake until the different parts of the lung were put together, and he saw the inflammation in all its stages. There is also, as in pneumonia, a tendency to bronchitis; and, if not to pleurisy, to something at least that tends to the formation of pleural adhesions—not merely when abscesses may be threatening to burst into the cavity, but in an early stage of the disease. And there is one organ—the larynx—in which ulceration, apparently of the most simple form, and very generally, so far as I can remember, without a trace of tubercular deposit, is seen in connection with tubercular disease of the lungs. There must be something peculiar, however, in this ulceration of the larynx, as it is never seen in common acute pneumonia. Simple ulceration of the large intestine is also very common. But, if the tubercular deposit is allied to pneumonia, there are some very marked points of difference: one affects the upper and the other the lower part of the lung; one tends to the formation of cavities, and the other scarcely ever suppurates; one affects various organs in the body, and the other is confined to the lungs; one tends to death, and the other to recovery. In both cases the deposit, according to Niemeyer, forms upon the free mucous surface of the terminal branches of the air tubes; but this is nothing more than what was insisted upon and figured by Dr. Carswell. It appears, he says, as if thrown in with a syringe. His views, however, though very extensively known to his own countrymen, were never accepted by the profession; and, having slumbered for many years, are now revived in Germany.

The third form of tubercular deposit that I have described has been for a long time generally regarded as a form of chronic pneumonia; and, in the very few cases that I have seen, it certainly has looked as much as anything like the result of chronic inflammation, modified by an unhealthy state of the system. I have never, however, seen this structural change in the lung when the case began as one of common acute pneumonia, and never a case in which there could be a question as to which form of disease existed; whereas, I have several times seen cases that were intermediate between acute pneumonia and the opaque form of tubercular disease, so that it was impossible to assign them a place under either head—the symptoms being taken into account as well as the morbid appearances. The term inflammation has always been used very loosely, and never more so than by some of our modern pathologists.

As to the gray granulation, I have never seen any of the usual appearances of inflammation in or about it. The size and scattered form of the deposit, also, would favor the old idea of its being a peculiar product; but this is no more, in a case of chronic disease, than what we see in variola, as an acute affection, and as distinguished from an erythema. The gray infiltration looks no more like a process of inflammation; and it seems to be rather a stretch in the use of the term, to say that either of these pulmonary affections is inflammatory; but if one is, I believe that they both are.

The miliary tubercle looks more like the result of inflammation, as it is an acute affection, and the intervening pulmonary tissue, as above stated, so often shows appearances of inflammation. This last may be a secondary affection, but it shows the tendency of the disease. As to the locality of the structural change in this and the two previous forms of disease, I have supposed from the general appearance of the deposit that the parenchyma of the lung was affected. A minute, white, soft deposit is sometimes seen in patches in the mucous membrane of the primary bronchi and lower part of the trachea; but, supposing it to be of a tubercular nature, it does not particularly resemble the miliary tubercle, and I should question any inference from this fact that miliary tubercles, when scattered through the lungs, originate from the mucous membrane. The deposit, though so marked in the largest bronchi, I have never seen in the smaller ones, except near the opening into a cavity.

Niemeyer describes a form of catarrhal pneumonia as occurring in some acute infantile diseases, and tending to degeneration. A few scattered lobules, here and there, have very much the red, defined, carnified look and feel that we see in the imperfectly inflated lung of a new-born fœtus. This appearance I have seen quite a number of times, but never the changes in it that he describes.

One of the peculiarities of the tubercular form of inflammation, as it may be called, is, as I have already said, its tendency to affect other organs than the lungs, but varying much in this respect, in different subjects, and also according to the age. In the lower half, more or less, of the small intestine, the opaque deposit is seen, commencing apparently in the mucous membrane, and going on to form an open ulcer that extends by a repetition of the process that originated it. Peyer's patches, also, are still more subject to this deposit, and consequent ulceration. But in the large intestine, on the contrary, the ulcers very often show none of the opaque deposit, and so far resemble those of the larynx as above stated. Niemeyer regards these ulcers, and especially those seen in Peyer's patches, as generally of a "scrofulous" character, and to which the patches, by virtue of their character as an aggregation of elementary lymphatic glands or ganglia, might very well be disposed. He speaks of the intestinal affection as a complication of the pneumonia (tubercular disease), but he does not undertake to trace a connection between the two, if he believes in it; and unless the pulmonary affection was something very different from a common pneumonia, I don't see how it could be traced. Drawing an analogy between the intestinal (Peyer's) and the cervical glands, he says that, as a scrofulous disease of these last is associated with disease of the neighboring mucous membranes and skin, so a similar affection of the intestinal glands is with "chronic catarrhs of the intestine," and by which he probably means some form of inflammation of the neighboring mucous membrane. I have, however, often been struck with the perfectly healthy appearance of the intervening mucous membrane in cases of extensive ulceration, though I would by no means say that this is always to be seen. Niemeyer says that these ulcers "have the evident stamp of a very ancient origin, are often partly cicatrized, and the mesenteric glands contain as a rule cretaceous matter." These three statements are utterly at variance with what I have observed here. The duration of the disease, whether in the intestines or in the lungs, varies in different subjects; and in the intestines it sometimes comes on early in the pulmonary affection; but I never had any reason to suppose that it preceded this last; and I certainly have never seen any indications of great age in the intestinal ulcers. Partial cicatrization, as he describes it in his Pract. Med., I never saw any approach to. Complete cure, he says, is rarely seen; and, I believe, he may well say so. As to the cretaceous matter in the mesenteric glands, I have not often found it under any circumstances; never, so far as I can remember, in a case of intestinal ulceration, but generally in a healthy adult who had died of some disease entirely foreign to the intestine.

Niemeyer remarks that tuberculosis of the spleen cannot be recognized during life. Several years ago I saw two children in whom the organ was enlarged by the disease. One only was examined after death (No. 581 in the Society's Cabinet), and the organ was so large as to be felt far below the cartilages of the ribs. The other was a child with marasmus, but no marked local symptoms to explain it; the spleen being evidently enlarged, I examined the chest, and found the physical signs of phthisis. Within a year or two of this last case I saw a man with an obscure febrile affection; the spleen was distinctly felt, but there seemed to be good reasons that I cannot now recall for supposing that it was not a case of typhoid fever; and, though the spleen is by no means so liable to tubercular disease in the adult as it is in children, I was inclined to regard it as one of those cases of rapid tubercular development that simulates fever, and in which the spleen was involved in the disease. It certainly would be well to bear in mind this fact of enlargement of the organ in infantile marasmus, that requires a local explanation.

Patients with consumption have generally been considered as doomed, but of late years a more favorable view of the disease has been taken; and particularly is it so with Niemeyer. He does not consider phthisis "as an especially dangerous disease; the cavities show ordinarily a decided tendency to heal; the greatest danger for most phthisical patients is that they may become tuberculous" (Phthisis Pulmonalis, p. 19). Caseous masses, he also says upon the same page, may be completely absorbed. This is going very far; and yet I have been perfectly satisfied for very many years that the disease might not merely be arrested, but that the deposit might be entirely absorbed. The proofs are anatomical, and strengthened by observations upon the living body. The very great number of cases in which the remains of former tubercular disease are discovered is a striking fact; the subjects having perhaps been perfectly healthy for many years before death. Cicatrices of the substance and a puckering of the surface of the lungs, towards the apices, are not very rarely seen; and when they are of considerable size they show without any reasonable doubt that there had formerly been a cavity in the substance of the lung. And, when we see a few small, defined, hard, whitish and dryish granules, we cannot suppose that there had been just so many tubercular deposits that had been arrested and degenerated, and no more. We cannot prove the fact, but the probability is that there had been many more, and that the rest had been absorbed. Cavities occasionally show signs of arrest, and the history of the individual accords with the anatomical appearances. Dr. Dixwell, one of our most highly respected physicians, died in 1834 of acute pneumonia; and, on dissection, there were found irregular cavities at the apices of the lungs, about the size of an English walnut, with thickened, firm parietes, filled with a bluish, pasty substance, and showing every sign of arrest; also a few perfectly latent tubercles. Dr. D. had had two copious hæmorrhages—once twenty-two years, and once five or six years before death; and after each attack he was supposed to be in consumption. He did, however, a large professional business, and looked like a man in fine if not robust health, though he always had a loud, sonorough cough. A very similar case also, anatomically, though the progress towards a cure was not quite so advanced, was that of a merchant of this city who died of yellow fever.

There is an appearance that I have often and long ago observed, and that must be familiar to many; and yet I have never seen it noticed. The surface of the lung at the very apex, and I have seen it nowhere else, has a wilted appearance to the extent of an inch or two; the color is a somewhat opaque white, mottled with black; the irregularity of the surface is well expressed by the term "wilted," and to the feel it is stiff. On being cut through, there is found beneath the surface a very coarse, lax, rather dryish, defined, and almost or quite black areolar tissue, to about the depth of a line midway. Beneath this the lung may be perfectly healthy, though oftener there are a few small, whitish, dried tubercles. Very light pleural adhesions often exist more or less over the surface, but nearly or quite as often the surface is free. This appearance, I believe, indicates the former existence of a tubercular deposit.

Observation upon the living body, also, shows not merely an arrest of disease, but absorption of the deposit. There are cases in which, by the aid of physical signs, we can, as it were, look into the interior of the lungs, and be, beyond every possibility of a doubt, sure of a diagnosis. The existence of tubercular disease may be considered as proved; and equally proved is its disappearance. A most striking illustration of this fact occurred many years ago in the case of a girl, who entered the hospital under the care of Dr. John Ware. Not merely the local and constitutional symptoms of phthisis were well marked, but there were strongly marked physical signs of an extensive tubercular disease in the upper lobe of the right lung. After a while she got well enough to resume her work; and about two years afterwards she was again admitted with cerebral symptoms. She soon died; and, on examination, I found large tubercular masses in the brain. The upper lobe of the right lung, however, was throughout entirely healthy; but the corresponding bronchial glands contained a large, opaque, tubercular mass. This case, certainly, needs no comment. Two other examples may be mentioned, that occurred under my own care some years ago, and both within the same year. The patients were Irish servant girls, who, by another coincidence, lived in the same family. In each of them the local and constitutional symptoms, and also the physical signs were unequivocal; and in one the disease seemed to have progressed so far that her case seemed hopeless. Yet I met this last patient, perhaps two years afterwards, and in robust health. The other also fully recovered. It was, I suppose, the opaque form of deposit that existed and was absorbed, as this it is that gives the marked physical signs that were observed in the above cases. They would be found also in the case of the gray infiltration or "chronic pneumonia;" but this, as I have said, is a very rare disease here. According to Niemeyer, when the physical signs are well marked the prognosis is better, as indicating simply phthisis, and not tubercular phthisis.

As to the pathological connection of the different morbid products above described, I have long since ceased to believe that the opaque deposit originated from the gray. The gray, as has been often remarked of late years, is liable to degenerate, like many other and very different morbid products; and, in the case of phthisis, when it becomes opaque from such degeneration, it would perhaps be impossible to distinguish it from a deposit that was originally opaque. In some cases, however, and especially in children, there is no gray deposit, but it is altogether opaque; and in others this last is out of all proportion to the other; and, on the other hand, the deposit may be nearly all gray, with but little of the opaque. In one case I think there could have been none whatever of a deposit that was originally opaque.

Niemeyer maintains strongly that the idea of a diathesis as the origin of phthisis, independently of exciting causes, is as irrational as it is dangerous. He says a great deal, however, of the "vulnerability" of the constitution in phthisical subjects, and I cannot but think that his objection to a "diathesis" is rather nominal than substantial. The different morbid products that are found in phthisis generally coexist more or less; and though it is a very singular pathological fact that they should present such diverse appearances, and quite as singular that they should tend to remain distinct, yet I believe that they essentially and pathologically constitute one disease, and that a constitutional cause, or "diathesis," is at the bottom of it—whether the disease is in the lungs alone, or in these and a variety of other organs. The same author seems quite convinced that what he regards as the true tubercle (the miliary) originates from some caseous product that will be found in some other part of the body if not in the lungs; but this seems to be a mere assumption, which, if true, would hardly be susceptible of proof; and it seems much more reasonable to suppose that the same constitutional cause, with the help of a little excitant, produced at different periods of time the two different attacks of disease.

Where Niemeyer is treating of the predisposing causes of phthisis he refers to another author who has observed its complication with "diabetes mellitus, cancerous affections and round ulcer of the stomach," and he endorses the statement. Here, as elsewhere, we have seen phthisis supervene in cases of diabetes; but cancer has seemed almost to antagonize tubercular disease, though we have now and then seen exceptions. In ulcer of the stomach, which is sufficiently common here, I have met with the complication but once. A reduction of the general health by disease, whether acute or chronic, does not seem particularly to predispose to phthisis.

In confirmation of some of the above statements I will close this communication, already too long, with two extracts from a lecture that I gave in November, 1849, and of which, according to my usual custom, I made a record after it had been delivered: "Tubercle has been, and is still generally regarded as a formation *sui generis*—as something essentially distinct from what is commonly called chronic inflammation. But for several years, or many, I have held the opposite opinion, and regarded them as intimately connected if not essentially the same thing. A point of very great practical importance; for, supposing it to be established, we should then feel that the tubercular deposit might be removed, as we know the inflammatory to be," &c. "The fact of the absorption of tubercular deposits is susceptible of proof. By auscultation we may be sure of the disease in the human subject, in connection with other indications; and by dissection, at a subsequent period, we may prove the healthy condition of the lung"; and then, in illustration, I referred to Dr. Ware's case, above quoted.

A CASE OF EXTREME EXOPHTHALMOS, THE RESULT OF FIBRO-FATTY TUMOR OF THE ORBIT. OPERATION. RECOVERY.

By W. H. Triplett, M.D., Woodstock, Va.

Mrs. S., aged 22 years, of small, delicate figure, but healthy; married; has two children, the youngest nine months; living in the eastern part of Rockingham Co., Va., sent for me Nov. 29, 1869, for disease of the right eye. On Nov. 30, when I saw the patient, the affected eye was projecting beyond the lids, with an inclination towards the cheek of something like a half inch below the horizontal diameter of the opposite eye. The pupil was natural and the iris of a healthy appearance. The tension of the ball was normal.

This state of things revealed the absence of intra-ocular disease. The conjunctiva was enormously swollen and injected, producing so much pressure upon the cornea that a large, sloughy looking ulcer had formed on its lower section, nearly destroying its entire thickness, and would have, in all probability, let out the contents of the organ in a short time. The upper lid was large and purplish, and rested upon the surface of the tumor. When pressure was made upon the ball to reduce the dislocation it did not recede in the least, but the attempt at reduction developed a firm resistance in the orbit. Above, in the supra-orbital region, there was unusual fulness, and the presence of a hard tumor occupying the upper portion of the orbit was made out; which was so very firm and resisting under pressure that it was believed to be fibroid. It appeared to fill up pretty much the whole orbit, pushing the eye before it. The history of the case was rather singular, and for that reason I give some of its details.

Something over three years ago the patient noticed a gradual loss of vision in that eye. There was no pain in it. She was *enceinte*. Three months after total loss of vision, with entire absence of pain in the organ, she went to childbed and had an easy and natural labor, the child living. Very soon, in an hour or two after delivery, intense pain attacked the eye. She now applied for medical aid, as the distress was insupportable. It was treated as a neurosis, and sulphate of quinia promptly arrested the pain. It is not very likely that any amount of scientific skill could have made anything else out of the case or suggested a better treatment.

After convalescence from childbed, she first noticed that her eye was a little popped—"a little fuller than the left eye," as she said. After this she frequently suffered from circum-orbital pains, "but when they became unbearable she always stopped them with morphine or quinine," and she had sometimes several months of rest or intervals between the pains. But the eye became more and more prominent, till, finally, she could not close the lids over the ball.

During the spring of 1869, Dr. I. W. Wynsborough placed the patient upon full doses of "Fowler's solution," and had the great satisfaction of noticing considerable improvement in her condition, so that she could close the lids entirely over the ball. But when it was hoped she was making a rapid recovery, presently pains set in again, and the eye became more prominent than ever. Since that time the disease has steadily progressed. At the time of the operation, I believed, from what I could make out for myself, that the disease was fibroid tumor of the orbit, which had originated in the locality of the optic nerve and early involved that organ, causing the first symptom of loss of vision.

Assisted by Drs. W. O. Hill, I. W. Wynsborough, Wolf and Conway, the patient was placed under chloroform, and a grooved needle was introduced below the supra-orbital arch into the tumor to ascertain its consistence; it seemed to be solid. The head resting on a low pillow, an incision was made through the outer canthus about three quarters of an inch in length, and the lid reflected over the orbital arch. The tumor was now seized with a vulsella, and a knife carried around it to divide the palpebral conjunctiva, which was very much thickened by plastic exudation and vascular dilatation. The dissection was difficult, on account of the firm adhesions of the growth. When the knife was carried into the deeper portions of the tumor, a quantity of cheesy, granulated fat escaped, intermixing with the blood, which flowed pretty freely.

I could not find a proper capsule, but strong bands of fibrous tissue confined the collection in front, and larger portions were with difficulty taken from the sides and bottom of the orbit. The optic nerve was healthy, but entirely surrounded by the growth. Hæmorrhage was arrested by free application of cold water.

On recovering consciousness she did not complain of pain, but suffered some nausea from the chloroform. She was placed under a full dose of morphia, and cloths wet with cold water were kept constantly over the parts. No filling of any kind was placed in the orbit, believing all such applications irritating and vicious, and to be tolerated only on the ground of *necessity.* The patient made a rapid recovery.

January 7, 1870.

Selected Papers.

EFFECT OF OPIUM AND ITS DERIVATIVE ALKALOIDS.

[Dr. S. Weir Mitchell has been continuing his experiments on the effect of opium and its derivative alkaloids upon birds. He gives a report of his work in the *American Journal of the Medical Sciences*, and sums up as follows. He states and answers a question as to the absorption of opium from the digestive organs of birds.]

M. Bernard has divided the effects of the various opium alkaloids into three classes, soporific, convulsive and toxic; one or other of the three being predominant in the case of each of these agents, but not of necessity to the exclusion of the other two. M. Baxt in like manner arranges them under the two heads of convulsives and narcotics, while Harley is disposed to consider that all of them are alike excitant, and hypnotic in varying degrees. Each of these observers may be absolutely right as regards the physiological reactions of the alkaloids in question, considered with reference to certain animals, but the attempt to apply their conclusions broadly so as to include birds, only serves to show the great necessity for caution in all such deductions.

Let us compare the results obtained by Bernard and Baxt with my own, premising that as yet, with the exception of morphia, these alkaloids have been as thoroughly studied as belladonna or woorara, and that neither Bernard's classification, nor Baxt's, nor mine, is more than a mere toxicological sketch.

M. Bernard believes, as I have said, that the opium alkaloids have three properties or powers: 1. Soporific; 2. Excitant or convulsing; and 3. Toxic. He classes them thus in the order of their power.

Excitant or Convulsive Agents.—1. Thebaine. 2. Papaverine. 3. Narcotine. 4. Codeine. 5. Morphine. 6. Narceine.

Soporifics.—1. Narceine. 2. Morphine. 3. Codeine. The three others have no soporific force.

In capacity as Poisons, viz., Toxics.—1. Thebaine. 2. Codeine. 3. Papaverine. 4. Narceine. 5. Morphine. 6. Narcotine.

What strikes us most about this arrangement is the want of relation between toxic power and capacity to convulse, as instanced in the position of narcotine, and the high place as a soporific assigned to narceine.

Waldemar Baxt, quoted in *American Journal of Medical Science*, October, 1869, regards the opium alkaloids as either narcotic or tetanically convulsive. In narcotic energy he arranges them thus: 1. Papaverine; 2. Morphia; 3. Narceia; 4. Codeia; &c. As convulsives, thebaine stands first, porphyroxin second, narcotine third, codeia fourth. Dr. Harley's view from this standpoint varies from that of Bernard or Baxt, and there are so many discrepancies among the three observers as to indicate the need for a still further examination of the subject. For reasons already pointed out, I have limited my own experiments to birds, and despite the statement of Bernard as to the power of morphia, codeia, and narceia, to produce in pigeons and sparrows the forms of sleep which he regards as peculiar to these drugs, I have been unable to detect anything in this direction, beyond a slight tendency to quietude, which we can never be sure is not due to the habit of the wounded or sick pigeon of seeking a remote corner and remaining at rest.

As regards power to stupefy, I can therefore make no classification. My experience with cryptopia has been too limited to allow of any positive conclusion. All but two of the other alkaloids examined by me cause convulsions, but thebaia alone appears to be truly a tetanizing poison, although in the duck, and rarely in the pigeon, morphia caused spasms, which may be termed tetanoid. Thebaia stands highest in rank as a convulsant, and is followed in order of power by narcotina, codeia, and morphia, meconine and narceine having no such influence. In this arrangement of narcotina I agree with Bernard and Baxt. Neither of them makes mention of meconine, which Harley regards as distinctly hypnotic, but which is almost without influence in the pigeon, even when given in enormous doses.

My own arrangement of the relative poisoning power of the substances we are considering would be as follows:—

1. Thebaia: 2. Codeia; 3. Narcotina; 4. Morphia—Meconin and Narceina being too innocent for addition to the list. It will of course be remembered that this statement applies only to birds, and chiefly, indeed, to pigeons.

The conclusions which I have finally reached in regard to the influence of opium alkaloids on birds are as follows:—

1. Birds—namely, ducks, chickens, and pigeons—are never poisoned by crude opium, its aqueous extract, or acetum opii (black drop), given internally; while the salts of morphia must be given in enormous doses to produce fatal effects when administered in the same manner.

2. Morphia salts, used hypodermically in excessive amounts, never cause sleep or stupor, but act as excitants (convulsants) upon the motor centres. In some instances, the spasms are tetanoid in character; but in the duck they approach nearest to the typical strychnic spasm.

3. Thebaia is a tetanizing agent, only inferior in energy to strychnia and brucia.

Narcotina, almost inert in man, destroys birds when employed hypodermically, in doses of from 2 to 7 grains.

Codeia is a fatal convulsing agent in birds (pigeons).

Meconin causes emesis when given internally, and is harmless if placed under the skin.

Narceia has no perceptible influence, except to disturb slightly the respiratory function.

Cryptopia in doses of 1-5 to 1-2 gr. has no effect.

None of these agents cause sleep in the pigeon, duck, or chicken.

The inaction of ingested opium is due, as I believe, to two causes.

First, to the very great slowness with which it, as well as morphia, is absorbed. This is shown by the fact that, twenty-four hours after a full dose has been given, the pigeon may vomit it in large quantities. In a few cases, the greater bulk of what I had given was thus rejected; but in many others all was retained.

The remaining amount of protection necessary to constitute an insurance against fatal results, must be due to the great difficulty with which pigeons, especially old birds, are poisoned by opiates. Probably elimination is sufficiently rapid to protect the system against a dangerous accumulation of the drug; but since the fæces and urine are evacuated from a common cloac, I have been unable to study the rate of excretion in a satisfactory manner.

Pigeons, and probably other birds, seem to possess the same peculiarity which causes certain men to exhibit, under opiates, only excitement of the motor ganglia, emesis, and a restlessness, which, with fuller doses, might possibly eventuate in convulsions—a rare incident of opium poisoning, which, however, occurred early in a case that I have elsewhere reported. The normal sleep of these birds is not nearly so profound as that of man; and, on the other hand, their motor nerve system enjoys the faculty of evolving an enormous amount of force, and, as compared to their cerebral manifestations, is far more prominent. It is possible that we may discover that equivalent doses may affect more profoundly, in the direction of stupor, the creature taking them in proportion as its cerebral development is greater and its brain more active. Such, at least, seems to be the probable conclusion from a general survey of the effects of morphia on various classes of animals; while, especially in mammals, it will, I think, be discovered that individual peculiarities come in to modify the result, as they never so distinctly or so frequently do in the lower grades of animal life.

I had suspected that the enormous respiratory apparatus of birds might have some share in protecting them from opiate poisons; and this may possibly be the case, but I may add that I have failed to make it sure by the aid of experiment. An elaborate series of nearly an hundred experiments were made, to discover whether oxygen gas would increase this protection, and whether a small percentage of carbonic acid in the air breathed would plainly destroy it, and cause to be fatal doses which are not otherwise lethal. The great labor thus expended failed to afford any other than a negative result, and only left it clear to me that the inhalation of oxygen does not protect the system which has been attacked by morphia.

Genesis and Geology.—Agassiz has repeatedly been charged with unbelief in the book of Genesis. He replies that this is a gross falsification, in words and spirit. He stands upon his published record as expressed in the last chapter of the first volume of his Fossil Fishes, or the Essay on Classification, or the first volume of the contributions to the Natural History of the United States, on his Geological Sketches, and on his Methods of Study.—*New York Medical Gazette.*

Reports of Medical Societies.

NORFOLK DISTRICT MED. SOCIETY OF MASSACHUSETTS. REPORTED BY WM. H. CAMPBELL, M.D., OF ROXBURY.

A REGULAR quarterly meeting of the Norfolk District Medical Society was held at the Everett House, Hyde Park, Jan. 12th, 1870, at 11, A.M. The President, Dr. Cotting, in the chair. The records of the preceding meeting were read by the Secretary, Dr. Jarvis, and accepted.

The District Censors announced that they had examined and admitted into the Massachusetts Medical Society Dr. James Morrison, lately of San Francisco, Cal., who, being present, signed the By-Laws, and was introduced by the President to the Society.

The discussion being now in order, on *Peritonitis, Idiopathic and Puerperal*—

Dr. J. Stedman, of Jamaica Plain, read a paper, in which he gave the views of modern writers, to the effect that purely idiopathic peritonitis was a very rare disease—that peritonitis generally was incidental to some other affection of the abdominal viscera; the most frequent cause, exclusive of its occurrence in puerperal cases, being perforation of the alimentary canal.

He stated that the treatment of idiopathic and puerperal peritonitis should be conducted on nearly the same principles.

First, and of great importance, was pure air, of a dry and even temperature;

Second, the administration of opium (commencing with the sulphate of morphine) in proper doses and sufficiently often to remove pain and quiet restlessness, as also to control the action of the heart and the number of the respirations;

Third, the proper administration of nourishing and easily digestible food, and some gentle stimulant if there be any danger of sinking.

Bleeding, purging, or mercury would do more harm than good.

In puerperal cases he recommends the daily syringing the vagina with a weak solution of permanganate of potassa, and the giving of chlorate of potassa internally.

Dr. Stone, of Walpole, referred to two cases which had come under his notice in which peritonitis had proved beneficial by arresting the growth of ovarian tumors; and in one of the cases obliterating the tumor. In the treatment of peritonitis he believed that opium was the chief remedy to be relied upon. He spoke also in favor of the use of liniments containing chloroform, which should be applied on cloths and covered with oiled silk, as relieving vomiting and pain.

Dr. Tower, of South Weymouth, read a paper, going over pretty much the same ground as Dr. Stedman, quoting Flint and Aitken as holding that idiopathic peritonitis is a very rare disease. He said that formerly the treatment had been prompt and heroic on account of the urgency and violence of the disease; but that mercury had been resorted to traditionally and did no good, and bleeding might do harm. Cathartics were condemned. He recommended opiates in large doses, even to as much as half a grain of morphine in solution every two hours. He spoke of a case of peritonitis following an adherent placenta treated throughout by morphine in doses sufficient to keep the patient free from pain, with complete recovery. He also spoke of a case following criminally induced abortion, in which there was pelvic cellulitis and peritonitis, as shown by *post-mortem* examination, there having been little or no pain to indicate the extent of the disease.

Dr. Tower spoke of using disinfectants on the hands after visiting erysipelatous patients, and asked the opinions of the members.

Dr. Tucker, of Stoughton, gave his experience in the matter, and said that he had noticed a connection between erysipelas and peritonitis, which in his opinion ought to be oftener recognized by physicians than it has been. He related several cases in which there was a seeming connection between peritonitis and erysipelas; as, for example, one case in which, during the prevalence of erysipelas, two children of the family had the disease, and the mother, who watched one of them, being then in an advanced stage of pregnancy, after delivery became affected with peritonitis and died of it. Shortly after attending to this case he took care of another parturient woman, and she also had the disease; and he thought now, although he did not recognize the fact at the time, that perhaps he carried the disease from one to the other. He thought, too, that peritonitis may be caused by the discharge from foul wounds or ulcers.

Dr. Tucker spoke also of a case in which there were violent pains and great tenderness in the epigastric region, which subsided at once on the appearance of an erysipelatous eruption on the back. He thought the peritoneum was not unfrequently attacked with an erysipelatous inflammation, constituting one species of peritonitis, and instanced the case of a young lady of 17, who, with her father, visited a family 20 miles distant afflicted with erysipelas, and within ten days after their return she was attacked with all the symptoms of peritonitis, which proved fatal in about eight days; while, three days after she was taken, the father had a severe attack of erysipelas of the face, extending over the scalp, from which he barely recovered.

As for treatment, he advised the application of leeches over the tender points, and the exhibition of opium, as needed, and fomentations.

The discussion now becoming general,

Dr. Alden, of Randolph, said that most of the cases he had seen, had originated in local causes. In puerperal inflammation the former practice had been to bleed freely. The present fashion is to give opium. At any rate we should *do something.* The particular measures must be decided by the indications in each case. Bleeding, to be useful, must be resorted to early. In some epidemics no treatment seemed to be successful.

Dr. Gilbert, of Dorchester, related a case in which champagne in large quantities had seemed to prolong life, when other stimulants had failed to do any good, and were badly borne.

Dr. Burgess, of Dedham, saw very many cases during an epidemic which occurred in the Dublin Lying-in Hospital, while he was an Interne. Whatever the treatment there, nearly every case proved fatal. The cases seen in private practice here proved of a much milder type. He thought the causes were in a measure avoidable, especially in the puerperal form, by more care in the management of the patient during delivery, &c.

The fact of its communicability no one can doubt who has read the reports of the Vienna Hospital.

In the treatment he would give opium to secure rest at night, but in the day only enough to allay the urgent symptoms. At the same time he would give all the food possible, and stimulants as the case required.

Dr. Holmes, of Milton, said that while agreeing in the main with the opium treatment advocated by the other members, he believed that an important thing had been omitted, and that was stupes of oil of turpentine, which he said were best applied on some kind of large leaf, which should first be wilted and then rolled out flat and smooth. This fomentation should be followed in a short time by a flaxseed meal poultice; and this whole process repeated every six hours or so, till relief was obtained. A short time should elapse between the removal of the stupe and the application of the poultice, to prevent the smarting sometimes occasioned by the turpentine. The above had been suggested to him many years ago by Dr. Miller, and the results had been very satisfactory.*

Dr. Cushing, of Dorchester, thought that the question of the liability to contagion was of the utmost importance. There were two views taken, and it was proper to have some definite opinion. If physicians carry the disease, the fact should be known, for the physician's duty is to aid the woman and especially not to increase complications; and if, instead of carrying safety, he carries danger, it would be well to know it. He thought that since the question was undecided and until it was settled in the negative, it was the physician's duty to abstain from attending parturient women while attending patients with puerperal fever, and that the occurrence of one case of puerperal peritonitis in his practice should be a warning to him to stop visiting such patients till he had got clear of the infection. How long it would take to do this, seemed to be a question; a month at least should elapse before attendance on a new case. He thought it was the bounden duty of a physician to refuse to attend any second woman after one such case of peritonitis occurred in his practice. He should feel that he was responsible for the second case if two occurred in his practice in succession, unless such measures had been taken as would make it reasonably sure that he was not the medium of communication.

Dr. Edes, of Roxbury, said that at the great Lying-in Hospital at Vienna the hands of the attendants were cleansed previous to each examination, first with soap and water, then with chlorine water, and then with a solution of permanganate of potassa.

After some further desultory remarks on the subject by Drs. Gilbert, Campbell, Green of Dorchester, and others:—

The President said that although idiopathic peritonitis was quite rare he had met with an occasional case where it could not be traced to any other affection—once in a gentleman who recovered from the attack. Peritonitis might occur in parturient women unconnected with other diseases; but puerperal fever was another and a peculiar disease, which peritonitis often accompanied, though not necessarily. Puerperal fever, though generally sporadic, was now and then epidemic; and when epidemic, sometimes seemed to be contagious also. It would be well in practice to act on the possibility of contagiousness, though the kind of reasoning brought to establish it, might prove the same of almost any other disease. In an epidemic some years ago, while attending eleven cases of labor, four patients, nowise connected, had puerperal fever. In these cases there was evidence sufficient to satisfy his own mind that there was a period of incubation beginning before the labor. At any rate, the circumstances were such as to preclude the idea that he carried the disease to these four; and others whom he attended at the same time received no harm. If a practitioner must give up further attendance on the occurrence of a case of puerperal fever, in strict logic he must abandon such practice altogether, as the proper time for return to it could not be stated, for even after a year's absence a first case on resumption has been followed by this disease. Nevertheless this was not too great a sacrifice, were the necessity evident. But cases of puerperal fever were almost always present in large communities, coming without known cause, and enentirely disconnected with each other; and not communicated, though as a general rule little or no caution was taken. A succession of cases in an individual's private practice is of rarest occurrence; if anything, more rare than in other diseases beyond suspicion of contagiousness or of being conveyable by attendants. In Vienna a long interval of exemption, since interrupted, was attributed to the customs, spoken of today, which had been adopted there; while in other places a similar exemption was ascribed to segregation and fresh air. Every practicable precaution should be attended to. A filthy doctor was an abomination not to be tolerated at any time. Many agents are loosely called disinfectants. Some of these are deodorizers, and very useful as such; while others leave as bad odors and as irrespirable airs as those for whose removal they are employed. And of what avail is the addition of smoke, of any kind? Such a thing as a true disinfectant, one that will destroy disease or its "germs," is unknown. Besides, as Dr. Proctor says, "there is no evidence to show that any infectious disease is of necessity associated with odorous matter."—(*Monthly Med. Rep.*, No. III., p. 199.)

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* The President, at this point, referred the members to a suggestive article on *counter-irritants* by W. H. Dickinson, in the August number of *The Practitioner*.

Erysipelas is a dangerous complication, as much so for a parturient patient as for one recently amputated; and from somewhat analogous reasons. He had known, however, the external organs to be invaded by erysipelas immediately after labor without inducing puerperal fever in the patient herself, or affecting injuriously another in an adjoining bed. A prominent teacher recently declared to the British Association that in private practice two thirds of the cases of puerperal fever arose from scarlatina, and in hospitals the same proportion from erysipelas. Probably there can be adduced as good arguments for the one statement as for the other, and yet neither be true. An association of diseases, however frequent, is not positive proof of their identity, or of their being causes one of the other. We do not often hear of puerperal fever producing scarlet fever or erysipelas, which we should, were the diseases convertible. Some diseases generally appear in connection with each other, but it is not usual, if it be possible, for a disease to begin as one thing, and then "run into," become, and end as, another and quite a different disease.

The various allegations alluded to, whether hitherto proven or not, and the proof rests with those who make them, should exact the greatest caution of practitioners, and stimulate to further and more accurate investigations.

At 2, P. M., the Society adjourned.

Bibliographical Notices.

Handbook of Diseases of the Eye, their Pathology and Treatment. By A. Salomons, M.D., Fellow of the Massachusetts Medical Society, &c. Boston: James Campbell. 1870.

A useful handbook of ophthalmology, substantially correct in its statements, and published in an attractive form. It gives an intelligible *resumé* of the principal affections of the eye and the chief operations to be undertaken in this department of surgery. The author exhibits a remarkable power of condensation, as examples of which we would point to the article on diphtheria and the section on accommodation and refraction.

The typographical errors are more annoying than numerous; sometimes, however, might lead to a serious misunderstanding, as in the statement (page 1) that the mirror of the ophthalmoscope is ordinarily convex.

On the whole, this little work is well adapted to fulfil its purpose of giving the student a table of contents of the science of ophthalmology, and serving him as a general guide book to the country he must himself explore. H. D.

Medical and Surgical Journal.

BOSTON: THURSDAY, FEBRUARY 10, 1870.

NOTES ON CURRENT TOPICS.

Phrenological Materialism.—On pages 196 and 197 of the *Journal of Psychological Medicine* for January we find these words:

> "This work on Phrenology [a book by James P. Browne, M.D., of Edinburgh] brings to mind the one great thing that must be said in favor of this so-called science. The division, excited by many of the books on this subject, is apt to prevent the reader from giving the credit that is due to the results achieved by the many scientific men who at one time and another have been favorable to the central idea around which the phrenological doctrine is grouped. It is mainly to the labors of those who have inculcated the doctrine of the localization of faculties, that the metaphysical conception of mind, as an entity separated from and at continual variance with matter, has become a thing of the past, and in its place substituted the conception of a force developed from and dependent on the changes induced in a material substratum, the brain. For their timely aid in achieving so great a work, not only in popular but in professional opinion, scientific men are their debtors, and it is but just that, in condemning their errors, we should accord credit to whatever of truth may be found in their system.
>
> "No fact is more certain than that a living brain, normal in size and supplied with a due amount of good blood, will manifest the phenomena of healthy mind, and that the moral and emotional qualities of this mind will be the resultant of the conditions under which the brain is developed and surrounded. In other words, were it possible to accurately determine and appreciate the circumstances that have surrounded an individual, as well as the hereditary predisposition he possessed, his character could be determined with as much accuracy as an eclipse can be predicted."

That is to say, a man's character is the resultant of the hereditary and surrounding influences appertaining to him. "I will! I choose"! are a sufficient refutation of the statement. The metaphysical argument in opposition to it is as impregnable now as it ever was. The innate idea of mind developed in every form of civilization, through all history, is not to be blotted out by a few theorists, who think to deny its existence because the scalpel does not find it in dissecting dead nerve fibres, or because the microscope does not detect it among nerve cells. We have previously written upon this point; and will therefore now confine ourselves to the remark that anatomy and physiology do well when they deal only with objective investigations on the formation and the phenomena of the body, and leave the subjective manifestations of the mental essence to the domain of metaphysics.

Another Phase of Heredity.—In the notice we have before given of late papers which have discussed the subject of heredity, we have failed to discover much that is new save in the matter of sex-digitism so-called. Beside some slight allusion to the recent theory that the alleged pernicious results of consanguineous marriages are due to the breeding in and concentration of previously exciting hereditary taints instead of the creation of new ones, little or nothing is advanced which has not been set forth before, and fresh collections of facts are not adduced to confirm the old. The most striking original theory on this head which we have met with of late, is in a work of *fiction*. "Many a truth is said in jest" is applicable to its author; and we also strongly suspect that in a romantic garb our Professor of Physiology has clothed an interesting fact relative to hereditary transmission. We refer to the remarkable book called "The Guardian Angel." Turning aside entirely from the controversial theology of this story, which latter we cannot too much admire for its strength and beauty, we call attention by a word only to the physiological thesis propounded in it.

The heroine is made to inherit from her ancestors on one side tendencies toward those virtues which are the source of dignity, safety and repose; but also qualities from her forbears on the side of her other parent of wild, fantastic, and dangerous passion. At one period of childhood and adolescence, the second set of influences have sway. Events disclose the precipice to the brink of which these latter have brought her, and noble motives, together with a pure affection, woo her to *her better nature*, which now develops itself rapidly. She finally *chooses* (mark the words!) *her better self.*

Now, herein is wrapt what we believe to be a truth which writers have said very little about. They tell us that a child inherits the physical qualities of one parent, and the mental qualities of the other parent. In the same breath they inform us that sometimes the offspring does not receive its parent's peculiarities at all, but those of one or another remote ancestor. The phenomena of heredity are often presented in an undigested mass, and hastily generalized so as to clash with each other. The fact we allude to is, that occasionally, at least, some ancestral qualities manifest themselves at one period of life, while those belonging to other ancestors are developed at a later stage of the existence of the same individual. This is certainly to be observed in physiognomy—the young child looking like one parent, and when it has become an adolescent or adult resembling the other. Analogy, we know, is not proof. But it may start a presumption in favor of a theory.

Medical Journals in the United States.—The comments of the London *Medical Times and Gazette* on the defects of medical journalism in this country, suggest to us what any one who has access to the exchanges must see—that we need fewer journals, with liberal payment of professed writers and investigators. Dilution and trituration, whether in point of contributors or subscribers, do not work well in medical literature. The *Times and Gazette* advises less dependence on foreign sources than now obtains. Bye and bye we may have so many facts to present and so much to say, that we shall have little room comparatively for the re-printing of and translating from trans-atlantic articles. But, at present, we opine, a good service is rendered to the medical reader in laying before him the wheat winnowed from the chaff of European journals. First-rate writers among us, however, have taken the field. Let others join them, and we may eventually have a full equivalent to give for what we receive. We should add that all is not solid gold in foreign medical writing. A friend of ours often finds in it many words in proportion to the substance—something, in fact, which looks very much like *writing against space.*

A new Die wanted for the Broad Seal of the City of Boston! The present die in danger of being soon worn out! Acknowledgments of affidavits extraordinary by the medical Mayor of Boston, and by the Governor of Massachusetts! To what base uses may we come at last!—If the time of our Governors and Mayors is to be taken up in acknowledging affidavits for the advertisements of medical practitioners, their salaries should be increased—or something. Read the following!—

To the Editor of the Boston Daily Transcript. Sir,—The remarkable benefit which I have derived from Dr. Dewey's treatment in my case by inhalation induces me to make it known through your columns for the benefit of the public.

For three years I have suffered from bronchitis and catarrh, complicated with spasmodic asthma. I have steadily grown worse, notwithstanding I was under what was considered the best medical treatment that could be procured in Boston, Massachusetts, and Savannah, Georgia. My breathing was so oppressed that the slightest exertion rendered life a burden. The day I placed myself under Dr. Dewey's care, the 20th day of October, 1869, my sufferings were beyond description. He examined me carefully, prescribed medicines for me to inhale in different ways. Happily for me, I no sooner commenced his treatment than I found such relief as I never hoped to experience again in this world. From that day to the present moment I have gone on steadily improving, until to-day my breathing is free, distress has vanished, and I thank God again for the enjoyment of fresh air in my lungs to invigorate and strengthen me. I am now able to exercise freely without any oppression in breathing, and, in fact, I feel like a victim freed from the grasp of a relentless enemy. I am truly grateful that I ever saw Dr. Dewey, and placed myself confidently under his treatment. I give this statement voluntarily, as a duty I owe to those who suffer as I have done.

Respectfully, CHARLES HINCKLEY,
No. 50 Beach St., Boston, Mass.

Commonwealth of Massachusetts.
Suffolk ss. Boston, 15th Nov., 1869.

Then personally appeared before me the within named Charles Hinckley, and made oath to the truth of the within statement subscribed by him. In witness whereof, I have hereunto set my hand and the seal of the said city of Boston, the day and the year above written.

NATH. B. SHURTLEFF, Mayor of Boston.

Suffolk ss. Boston, Nov. 25, 1869.

Then personally appeared the said Charles Hinckley, and subscribed and made oath to the truth of the above statement.

Before me, WM. CLAFLIN,
Governor of the State of Mass.

Dr. Dewey's statement of Mr. Hinckley's case.—His case was one of chronic bronchitis, œzena, complicated with spasmodic asthma, caused by the irritation of the air cells of the lungs from cold, and forming one of the most dreadful maladies to which man or woman is heir; in fact, a species of slow suffocation. The chief features to be observed in the result of the treatment by inhalation, which was most satisfactory in this instance, were the immediate benefit derived, as well as its continuance, and the great relief from all the distressing symptoms so greatly expressed by the patient.

D. B. Dewey, M.D., may be consulted personally at his office, No. 5 Harrison Avenue, on all diseases of the throat, chest and lungs, embracing catarrh, sore throat, bronchitis, asthma, consumption and heart disease, to which branch of the profession his practice for seventeen years has been exclusively confined.

The above testimonial of Mr. Charles Hinckley, whose authenticity is attested by the Mayor of Boston and the Governor of the Commonwealth, is selected from numerous others, which can be seen at my office, 5 Harrison Avenue.

For a thorough examination of the chest, $2.00.

RIGHTS OF THE MEDICAL STAFFS OF HOSPITALS.—Says the *Medical News and Library*: * * * "It is one of the anomalies of the present age that medicine, which was never before so full of knowledge and power, nor so lavish in conferring benefits upon society, should, nevertheless, be so generally decried by teachers of philosophy, and subjected to such wanton insults by those it has most efficiently served.

"In the army and navy, not only of the United States, but of Europe also, the claims of the medical staff to an appropriate rank are treated by the political authorities with derision and contempt.

"The wise and enlightened counsel of our brethren to Boards of Managers concerning the construction and economy of hospitals is unceremoniously thrust aside; their administration of medical and surgical offices is sometimes interfered with, and they are made to feel, as far as can be, that, not educated, scientific, and skilful physicians, but managers and trustees, albeit entirely destitute of professional knowledge, are the proper and rightful judges of medical questions, and are entitled to the power, which in fact they exercise, of overriding remonstrance and despising advice. This conduct appears the more extraordinary, as it is certainly the more offensive, when it is remembered that in this country physicians serve the hospitals gratuitously, while everywhere else their services are remunerated.

"The reasons for these anomalies, it appears to us, are two in number. The one is that physicians, by unselfishly giving their time and skill to public institutions, have cheapened their value. The other is that the superficial and illogical education, which even the lowest classes of society now obtain, has created a class of critics and judges whose dogmatism is on a par with their ignorance, and whom no fear of disastrous consequences deters from rash experiment and arbitrary innovation.

"It seems, therefore, to be high time that whatever of manliness and independence there is in the medical profession should be aroused, and that the managers of hospitals should be told, respectfully but plainly, that they are not the owners in fee simple of these institutions, but only administer them in trust for the public who support them, for the sick to whom they are devoted, for the physicians without whom they could not exist, and for the students of medicine to whose education they are indispensable."

Well said! Is it not time that the medical attendants of hospitals which are supported by wealthy city or State governments should be paid? The moment we rescind all regulations and tacit understandings making it a professional obligation to give our services to public institutions supported by wealthy corporations, though for the benefit of the poor, that moment those institutions are obliged to provide reasonable salaries for their medical officers. Hospital trustees or Governors will hardly take up with a poor article of cheap or gratuitous doctoring for the sake of saving a few thousands to the public purse, and will compete for the best men, as much as the professional men will compete for the offices. Where the hospital is an offshoot of the convent or monastery, and when it is supported by private benefactions of any kind, let us serve as heretofore, without money and without price. But, the indiscriminate donation of our time, thought, and dearly-earned skill, to private persons or public corporations who are able to pay for them, causes our professional services to be undervalued, and it is too often throwing pearls before swine. The course we recommend is advocated by the *London Medical Times and Gazette.*

ACONITE AND COLCHICUM.—Dr. Henry Power in the *Practitioner* recommends the use of aconite and colchicum in various rheumatic affections, and especially in those of the eye.

ACONITE.—At a meeting of the Medical Society of the County of New York, Dr. Pomeroy had frequently seen disastrous effects from over doses of aconite, taken by mistake or prescribed according to the rules of the text-books. In his experience this drug was almost always given too freely; and he could hardly imagine a patient taking five drops of Fleming's tincture every hour, without serious consequences. But in small doses, frequently repeated, its action was most happy. In combination with colchicum and iodide of potassium, he had found it of great service in rheumatism. Its special tendency to act upon the throat made it valuable in acute tonsillitis and other inflammatory affections of the fauces.

Dr. Caro had tried aconite on a man suffering from purpura hæmorrhagica, hæmatemesis, and meningitis. The pulse being strong, he had given one drop of the tincture every two hours, and it had paralyzed his patient.

Dr. Peters said that a case of purpura hæmorrhagica was the very last one in which he would use aconite. This drug tended to cause fluidity of the blood; and, in cases of poisoning, it produced large vibices on the surface and soft clots in the great vessels. But if the doctor would use it in cases of an exactly opposite class—in those of sthenic inflammation, with excess of fibrin—he would doubtless often find it serviceable.—*New York Medical Record.*

MR. EDITOR,—Having read in your JOURNAL of Jan. 15th a communication from "Lamoille," in reference to a "Collegiate Agency" in Philadelphia, I herewith send you a copy of a correspondence had with the same agency. Having obtained one of the cards, I at once wrote to the agency, as I was *desirous* of obtaining some *additional particulars.*

This correspondence was brought before our County Medical Society to-day, and action taken thereon.

These frauds are not, however, confined to the "Collegiate Agency"; some of our medical schools are also engaged in this nefarious business. During my residence in this county, no less than three diplomas have been obtained from medical schools by purchase, and were *sold* in each instance to notoriously incompetent practitioners of medicine.

Hoping that such exposures will have a tendency to cause all members of the regular profession to exert their utmost influence in having a stringent medical registration law enacted in their respective States, I am yours respectfully,

CHAS. H. LOTHROP.

Lyons, Iowa, Jan. 18, 1870.

[COPY.]

LYONS, IOWA, NOV. 22d, 1869.

A. J. HALE, M.D.,
214 Jacoby St., Philadelphia, Penn.

Dear Sir,—I have just received one of your cards, saying that an agency had been established for the purpose of giving information, &c., and the obtaining of diplomas for the different degrees. I wish to know by what means and the cost of obtaining a diploma from the University of Pennsylvania or New York.

I wish to get an M.D. I have been in the practice of medicine more than ten years. I have studied the required time, but was poor. I wish now to get the degree if it does not cost too much. Please give me all the information you can in reference to it; also your charge for getting it for me. Yours truly,

CHAS. H. LOTHROP.

[Copy.]

PHILADELPHIA, Pa., Nov. 25th, 1869.

Dear Sir,—Yours of recent date to hand. You can obtain, through the recommendation of this agency, the degree of M D. from a first class institution, for instance "Medical University" of this city. The faculty of this institution, which is at present in active operation, will grant you a diploma at a cost of $50; when two is granted at the same time, that is through the influence of the same person, for a different name, they can be had at $80 for the two. In other words, if you can influence another to take out a diploma, you save $10 to yourself. And *three* besides yours make yours (or the fourth one) *free gratis*. They will be sent you by express C. O. D. as soon as I receive your names in full as to enable me to have them printed correctly on diploma.

Let me hear from you soon.

Respectfully, A. J. HALE, M.D.,
214 *Jacoby St., Phil.*

SLAUGHTERING.—From the First Annual Report of the State Board of Health of Massachusetts, we take the following passages:—The condition of the Brighton slaughter-houses described in 1866, says Dr. Derby, has not been improved upon since that period. "They are even more offensive now, because their number has increased, and a larger population is exposed to their influence. There are now about fifty slaughter-houses scattered through the town, none of them of great magnitude, each occupied by a single individual or firm, and each a separate centre of polluted air. The combined effect is familiar to all who pass the Allston Station, on the Albany Railroad, in the summer months, or who drive through the town by the common roads. It is perceptible on the other side of Charles River, in Cambridge, when the wind blows in that direction. *It is entirely due to putrefaction, and chiefly of animal matter.*

"The great source of offence in all these establishments consists in the manner of disposing of the parts of the animal used neither for food nor in the arts. In the ox these parts are, the larger portion of the intestines and all of their contents, the 'omasum' or third-stomach, the spleen, the lungs, and about half of the blood. In the sheep, the intestines, spleen, stomach and all of the blood. Every slaughter-house has a piggery into which are thrown all these portions of the cattle and sheep. The result is a putrid mass, consisting of blood, which decomposes almost as soon as it falls upon such material, the excrement of the animals killed, and of the hogs, the half digested food contained in the entrails, and the offal itself, covered with decomposing matter. In this filth the hogs wallow. At uncertain intervals it is scraped out and banked up on the ground (often very spongy,) to await a purchaser, or is carted off to be spread upon land. The track of these carts is evident on the roads, both to sight and smell. The fat is carted for long distances in various directions, a portion going to Roxbury, another to Watertown, another to Cambridge and elsewhere. The portion of the blood of cattle which does not go to the hogs is taken away for the sugar refiners, but often not until it has become disgustingly putrid.

"The heads and feet are taken to the bone-boilers and glue-makers; the hides to the tanners. This general description of the disposition made of different parts of the slaughtered animals applies to all the towns about Boston where the business is carried on, except Cambridge, which city prohibits the keeping of hogs. The offal is taken from Cambridge to Lexington and elsewhere.

"The floors of the slaughter-houses are of wood, and are saturated with blood. In most of them there is no sewerage; generally an imperfect drain leads to some marsh or low piece of ground; sometimes to a brook. The surrounding ground is filled with decomposing matter.

"*The Slaughter-House Piggeries* are objectionable on the score of health: *first*, because they produce a questionable if not positively unwholesome kind of pork; *second*, because they poison the air of their neighborhood.

"The pig is almost the only quadruped feeding, in whole or in part, on flesh, which civilized man is willing to eat, unless pressed by starvation; among ourselves the only exceptions are the bear and the raccoon, and meat is not the chief food of either of these animals.

"The slaughter-house hog not only eats flesh, but flesh in a state of putridity, and is therefore entitled to be regarded as the *carrion beast*. If he is good to eat, so are the crow and the buzzard. Few persons would be willing to eat him if they saw him in his putrid sty, with wreaths of entrails hanging about his neck, and his body smeared with blood. We are not prepared to assert that eating pork fed in this way is productive of any special disease, parasitic or otherwise. It would be very difficult, and perhaps impossible, to prove. Butchers often say that pigs fed on beef offal make good pork, and better than pigs fed on sheep offal. However this may be, we can say with certainty that *human instinct* (which is sometimes better than reason) *recoils from such food.*"

[We are informed, upon inquiry, that very little if any of the slaughter-house pork finds its way into Quincy Market. We are told that it is mostly sold into the "packing houses," where it is salted and sold in bulk for the sustenance in part, we suppose, of "poor Jack." The spare-ribs are perhaps purchased by the lower class of provision stores.

We do not understand Dr. Derby to object to pork fed on grain. For ourselves, we are a follower of the late Dr. James Jackson in approving of it. In one of his "Letters to a Young Physician," Dr. Jacksons says:—"I know that it [pork] is contemned, and even thought injurious by many persons who are not Jews.. To some stomachs it certainly is offensive, even though it be of the best quality. But to many persons our New England corn-fed pork is easy of digestion, highly agreeable, and, as the phrase is, very *wholesome*. That is the term which in my early days many delicate persons employed when they meant that the article was good for the bowels." —Editor.]

"We know that the fat of the carrion beast is soft, and prone to decomposition unless his diet is changed to grain before killing. If the question is asked of any butcher in the market whether the pork he offers for sale is from a slaughter-house pen, the reply will be such as to satisfy the inquirer that such origin is not considered a recommendation.

"The second objection to slaughter-house piggeries is of a more positive character. If anything is settled as to the causes of disease it is the influence of decomposing organic matter in giving rise to diarrhœal affections, and typhoid fever, in depressing the vitality of children, thus rendering them less capable of resisting disease in every form, and in making all the epidemics more active and virulent. The slaughter-house pig-pens are filled with putrid animal matter, with rotting blood mingled with excrement, and are *therefore a source of danger to public health.*

"In making this statement we do not overlook the fact that Brighton, where most of the slaughtering is done and in the manner described, has not been, up to the present time, an unhealthy town. This apparent contradiction of a general law whose truth has been proved all over the civilized world, is capable, we think, of explanation.

"The town of Brighton is three miles long and a mile and a quarter wide, and contained in 1865 less than 4,000 people. Its natural sanitary advantages are very great. Its soil is for the most part dry, its surface is broken by hills of considerable height, and it is drained on its whole northern and eastern side by Charles River. The occupations of its people oblige them to *work in the open air*. They are butchers, farmers and market-gardeners. There are no shoe factories, or other industrial establishments requiring numbers of persons of either sex to work in doors.

"There is also general thrift, industry and prosperity, which, in themselves, always tend to make a people healthy. Scattered over the whole territory are about fifty slaughter-houses. It is evident, on looking at these establishments with reference to the position of the dwellings, that no one will live near a slaughter-house if he can help it.

"Each slaughter-house, with its associated pig-pen, is isolated, and exposed to the freest possible ventilation, both without and within. The foul air to which these places give origin is not breathed until it has freely mingled with air which is pure.

The absence of excessive mortality in Brighton up to the present time, is due, in our opinion:—1st, to the almost exclusive *out of door occupations of its people*; 2d, to its healthful site; 3d, to the separation and abundant ventilation of each of its many nuisances; and 4th, to the possession, by its people generally, of the means of procuring all the comforts of life.

"The happy exemption from serious disease to which we have referred *cannot continue* if ventilation is obstructed by a dense population. As soon as people are compelled to live in large numbers in the vicinity of rotting organic matter it cannot fail to produce its legitimate and well-recognized effect.

"The future character of this beautiful township, possessing rare advantages for the establishment of healthful and pleasant homes for a hundred thousand people, must depend upon the manner in which its chief business is conducted. Tainted air will finally attract a tainted population, while a reform of its slaughter-houses, which is both practicable and safe, will not only insure the *future* health of Brighton, but greatly increase the value of its territory.

"*Fat-melting and Bone-boiling.*—The fat and tallow and heads from the various slaughter-houses around Boston are carried to the melting and bone-boiling establishments. They also receive a large portion of the feet of the animals, and the fat, and odds and ends from provision stores, also very lean and unsalable meat from the markets. Some of them receive dead animals. These various portions are separated according to their fat-rendering value.

This material is carried about the neighborhood of Boston, and is finally delivered, in Boston proper, in Cambridge, Charlestown, Brighton, Roxbury and other towns. Here it is boiled in open vats, and emits a most offensive odor. Sometimes an attempt is made to carry off the vapors by a high chimney, but even in this case the lids of the vats are of wood, and the foul smell freely escapes.

"The effect of boiling is to drive off the watery portions, leaving in the vats tallow, lard, oil, or grease, according to the materials employed; also bones, and the scrap or "greaves."

The bones are shipped to New York, or sent to East Boston to be ground and used, for the most part, as fertilizers. The scrap is generally pressed into cakes to be used for feeding hogs or poultry, and sometimes is used as manure. At one of the largest of these establishments the scrap, dipped out of the vats, is spread in layers like fish-flakes and dried by a furnace. The odor in the building where this drying process is carried on is insupportable, and the general stench from the premises is such as to be perceptible several hundred yards from the entrance. And this in a part of Boston filled with a crowded population.

"*Disposition made of Dead Horses, Cattle, Sheep, Pigs, Dogs and Condemned Meat.*—In a population as large as that of Boston and its immediate vicinity, the amount of dead material of the description above referred to is very great, and it becomes every year more important that it should be disposed of in an orderly, cleanly and healthful manner. Dead horses from the streets and stables of Boston proper, are now carried through South Boston and shipped from the "Point" to Spectacle Island. Fifteen to twenty a week are here boiled in open vats, emitting a horrible stench, which is carried by the wind over the inner harbor and adjacent islands. Pigs have been kept at this place in large numbers, but in a recent visit we found only two. The place is disgusting, and filthy in the extreme.

"Dead cattle and sheep and pigs, from the railroad trains, are bought by the various bone-boiling establishments in the neighborhood of Boston and 'rendered' in the manner described. Some of them also receive horses. Many of the animals are putrid before a bargain is made for their removal. Dogs and cats for the most part get into the docks, or are thrown into the ash carts and go to make up the filling of new land.

"*The Remedies* for the evils to which we have called attention, may be thus expressed in their simplest form:—

"1st. The prevention of putrefaction.

"2d. The conversion of the offensive vapors, resulting from boiling, into inodorous and harmless gases.

"Everything connected with the business of slaughtering can, in one of these two ways, be disposed of, except the manure made by the animals, which need be no more offensive than in a well-kept stable.

"To accomplish all this it is necessary—

"1st. To give up the practice of feeding the offal to hogs.

"2d. To build abattoirs and melting houses within the same enclosure.

"Not a single step can be made in the improvement of existing modes of slaughtering without giving up the practice of feeding the offal to hogs; with them, reform is hopeless.

"It is not necessary to go to either Paris or London to see an abattoir on a very extensive plan. The 'Butchers' Hide and Melting Association' of New York have one in successful operation at the foot of 44th and 45th Streets, East River. * * * *

"By either of these processes, the condensation of the vapors by cold water, or the destruction by fire, every tallow-rendering and bone-boiling establishment can be made perfectly inoffensive.

"*The value of Blood.*—The reform of any social evil may be greatly hastened if it can be shown that it does not involve pecuniary loss. Whoever attempts to reform our mode of slaughtering animals must be prepared to meet the universal statement among the butchers that hogs fed upon blood and offal are a source of profit. *We cannot deny it,* while at the same time asserting that, as a source of danger to public health, the practice ought to be given up. But we also believe that *the loss of the value of blood* involved in the present system is enough to nearly, and perhaps quite, compensate for the gain in hog-keeping."

*   *   *   *   *   *   *   *

THE MUSCULAR LABOR OF THE UTERUS IN PARTURITION.—The Obstetrical Society of Dublin were the auditors, on Saturday evening last, of a most interesting and masterly communication on this subject from Professor Haughton, F.R.S., of which, not only were the details of the scientific investigation of the greatest interest, but the results obtained were of the highest practical value. The investigations were undertaken by Professor Haughton as part of the inquiry which he is about giving to the public in a work on Animal Mechanics. He applied himself to the testing of the relative mechanical power of the involuntary or uterine and voluntary or abdominal muscular system engaged in parturition; and by a variety of experiments and mathematical calculations, by ascertaining the weight of the muscles engaged, he has arrived at results which will, doubtless, astonish our readers.

He showed, with conclusiveness, that the expulsive force of the uterus, employed in dilating the os in the first stage of labor, amounted to 3·4 lbs. on the square inch; and he compared this result with the conclusion arrived at by Dr. Matthews Duncan, that the membranes required a force of 3·1 lbs. on the square inch for their rupture. Thus, he pointed out that the expulsive power of the uterus was just capable of rupturing the membranes and no more, and he illustrated by this comparison the beautiful and wonderful economy of labor evidenced in the human system. He found, however, that the expulsive force capable of being voluntarily exerted by the woman was enormously greater than that of the uterus, and was equivalent to 38·6 lbs. on the square inch, and he believed that it was by this force in the greatest measure that the expulsion of the fœtus was effected. He reduced his investigation to the following figures:—

Involuntary, or uterine force,	3·4	lbs. on square inch.
Voluntary, or abdominal force,	38·6	" "
Maximum expulsive power,	42	" "

Which, calculating the fœtal head to have a diameter of 4½ inches, would represent the enormous force of 593, or about a quarter of a ton, which *might* be engaged in parturition. He, of course, was aware that only a small proportion of this power was usually exerted.

The obvious practical bearing of this investigation on the use of chloroform in labor was pointed out by Professor Haughton; and he suggested that while it might be found useful in the very earliest part of each expulsive effort, from its temporary power of stimulating muscular action, its use afterwards was obviously injudicious, inasmuch as it paralyzed the voluntary power, on which the process of parturition so much depended. * * * —*Medical Press and Circular.*

M. PEAN recently related to the Academy of Medicine at Paris that out of ten cases of ovariotomy performed by him, seven had lived. This is a great advance in French surgery.

The *Gazette des Hôpitaux* give the report of a case in which chloral was exhibited to the extent of producing perfect anæsthesia, under which amputation of the leg was performed by M. Noir. After the operation it was long before the patient recovered his sensibility, and the symptoms for seven hours were most alarming: coma, succeeded by delirium, vomiting and prostration.—*Medical Press and Circular.*

DEATHS FROM CHLOROFORM.

At the Lincoln County Hospital, a boy aged 14, with necrosis of the tibia, who had taken chloroform safely on a former occasion. "The boy had become insensible and the operation had commenced, when he was seized with vomiting; after vomiting one or two minutes he became livid, his breathing ceased, and his pulse was imperceptible. In spite of the usual remedies death followed. The *post-mortem* examination did not reveal any peculiarity excepting enlargement of the liver."—*British Medical Journal,* Jan. 8, 1870.

M. L. Labbe communicated to the Imperial Society of Surgery, March 31, 1869, a case of this. The subject of it was a man aged 42, who had fractured both bones of his left leg January 19, 1869. Six days afterwards tetanic symptoms came on. To quiet the spasm, the next day chloroform was given, but after a few inspirations the pulse ceased, and the patient presented all the apparent signs of death. Artificial respiration was resorted to, the tongue drawn out, and after a short time the circulation and respiration were re-established. The patient was then put to bed, apparently in a satisfactory condition. But a moment afterwards the respiration suddenly ceased, and despite all the usual efforts, life became extinct.—*Journal Hebdomadaire.*

Medical Miscellany.

If the Journal called *Good Health* is to treat its readers to such articles as one of those in the February number it will, in our humble opinion, hardly attain its "aim—the improvement in human health—the lengthening out of human life." No amount of eminent names, and able papers within its covers could atone for such stuff. We are tempted to regret the qualified commendation we once gave of that Journal.

We show our appreciation of our Dublin contemporary—*The Medical Press and Circular*—in expressing our regret that it did not credit its extract from Dr. Clarke's address to this Journal. The extract related to the medical instruction of females at the same time and place with males.

Relapsing Fever is said to have appeared in New York. Take down your Watson and you will find the story of this disease tersely told in Lecture Lxxxv.

Turpentine as an Antidote to Poisoning by Phosphorus.—M. Curié has performed a very comprehensive series of experiments on this subject, which go far to disprove the theories announced some time since, and to show that the recoveries in certain cases were not due to the influence of turpentine as an antidote, when patients who had taken phosphorus, and were seriously imperilled by it, were saved, as supposed, by the administration of turpentine.

M. Curié selected both rabbits and dogs. The rabbits were given phosphorus dissolved in oil, and immediately afterwards the supposed antidote of turpentine; but all died in from six to thirty-six hours. Dogs, also, were experimented on with like result, and in one specially an injection containing phosphorus and turpentine together was used, and a sponge introduced to plug the orifice; the dog did not die on that occasion, but, as believed, from an insufficient quantity of the poison. On a repetition of the experiment the animal died. In another case a dog was given phosphorus; no remedy was used, and the animal finally recovered.

M. Curié therefore believes that it is fallacious to suppose that turpentine is an antidote to phosphorus poisoning, but simply acts by causing vomiting.—*Dublin Med. Press and Circular.*

Treatment of Hæmorrhoids.—M. Richet has published, in *L'Union Médicale*, a clinical lecture "On Hæmorrhoids," in which he advises the use of forceps, brought to white heat, to cauterize piles in several sections. The Professor gives a history of the various modes of operating which have been proposed, but omits to mention Houston's nitric acid plan, and the manner of seizing hæmorrhoidal tumors with a clamp, cutting them off, and arresting the hæmorrhage either with nitric acid or the actual cautery—an operation successfully practised by many British surgeons.—*London Lancet.*

With regard to the intermingling of the sexes in clinical teaching the *London Medical Times and Gazette* says:—"We are glad that the medical men of Pennsylvania have come forward to protect at least the modesty of their own sex. We hope that their example will not be lost on the other, and we commend the whole position to the consideration of the Universities of Edinburgh and Paris."

To Correspondents.—Communications accepted:—Reduction of Dislocation—Case of Chronic Gastric Ulcer—Medical Testimony of Experts, Report on—Muscular Excision as an Aid to Diagnosis.

Notice.—Part LX. of Braithwaite's Retrospect was mailed from this office on the 8th inst. to members of the Massachusetts Medical Society who have paid their assessments for the year 1869-70. Members who have paid and do not find the books at their post-offices, are requested to forward their vouchers to the Librarian, care of D. Clapp & Son, Medical and Surgical Journal Office, 334 Washington St., Boston.

Books and Pamphlets Received.—A Manual of Clinical Medicine and Physical Diagnosis. By Thomas Hawkes Tanner, M.D., F.L.S. Philadelphia: H. C. Lea. 12mo. Pp. 366.—Dr. Water's Doctrines of Life. Reply to London Lancet, and Closing Remarks. By J. H. Waters, M.D., St. Louis, Mo.—Medical Department of the Library of the Long Island Historical Society. An Account of its Formation, with a Catalogue of its Books.

Died,—In Lexington, Ky., Jan. 20, Benjamin W. Dudley, M.D., aged 85—"long the leading surgeon of the Valley of the Mississippi, and a teacher of surgery of wide fame."

Deaths in sixteen Cities and Towns of Massachusetts for the week ending Feb. 5, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases		
		Consumption.	Pneumonia.	Typhoid Fever.
Boston	96	21	6	2
Charlestown	9	2	2	0
Worcester . .	21	3	0	3
Lowell	18	3	0	2
Milford . . .	4	0	0	0
Chelsea . . .	7	1	1	0
Cambridge .	11	0	0	1
Salem	12	4	1	0
Lawrence . . .	8	1	1	1
Pittsfield . .	1	0	0	0
Fitchburg . .	4	0	0	0
Taunton . .	11	3	1	0
Newburyport	7	4	1	0
Somerville .	3	0	1	0
Fall River .	9	3	1	0
Haverhill . .	2	1	0	0
	223	46	15	9

Fourteen of the above places report no deaths from scarlet fever; Boston reports nine and Taunton two.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending February 5, 96. Males, 61—Females, 35.—Abscess, 1—accident, 1—apoplexy, 1—disease of the brain, 2—inflammation of the brain, 1—bronchitis, 1—burns, 1—cancer, 3—cancrum oris, 1—cholera infantum, 1—consumption, 21—convulsions, 4—croup, 3—cyanosis, 1—debility, 1—diphtheria, 1—dropsy, 3—dropsy of the brain, 1—scarlet fever, 9—typhoid fever, 2—gastritis, 1—disease of the heart, 1—infantile disease, 4—disease of the kidneys, 1—congestion of the lungs, 2—inflammation of the lungs, 6—marasmus, 3—old age, 4—paralysis, 2—premature birth, 3—puerperal disease, 3—rheumatism, 1—tumor, 1—unknown, 4—whooping cough, 1.

Under 5 years of age, 39—between 5 and 20 years, 8—between 20 and 40 years, 22—between 40 and 60 years, 15—above 60 years, 12. Born in the United States, 67—Ireland, 21—other places, 8.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

NEW SERIES.] THURSDAY, FEBRUARY 17, 1870. [VOL. V.—No. 7.

Original Communications.

HOMICIDES BY CHLOROFORM.

By "INNOMINATUS."

"WE regret having to record another death from the administration of chloroform. The unfortunate circumstance occurred on Wednesday, at the Middlesex Hospital. The patient, a man about 30 years old, was about to undergo a slight but painful operation for diseased bone, and was yet only partially under the influence of the anæsthetic when death suddenly took place. Every means were at once taken and persevered in for half an hour to revive the patient, but without avail. The chloroform was administered by Mr. Osman Vincent, chloroformist to the Hospital, who has had very considerable experience in anæsthetics."

The above is from the *British Medical Journal,* "being the Journal of the British Medical Association," for January 1st, 1870. Well may it "regret" such an "unfortunate circumstance," inasmuch as almost every journal furnishes "another death" by the same agent; and the whole number of victims to national prejudice already amounts to several hundreds. Why not call the administration of chloroform for such purposes by its true name, homicide, since there is an agent equally effective, and known to be perfectly safe. Yet one would think, on reading British medical periodicals, that such a thing as sulphuric ether was entirely unknown in the United Kingdom. A trial for manslaughter with a New England jury would bring British practitioners to a quickened sense of responsibility in the matter, and prove an effectual remedy to the recurrence of any similar "unfortunate circumstance." Notice that "the chloroform was most carefully administered" by one "who has had very considerable experience," and that the patient "was yet only partially under the influence of the anæsthetic when death suddenly took place." None of the usual subterfuges were possible in this case, no carelessness, no inexperience, no overdose. With such, and scores of such cases, continually recurring, how is it possible that medical men, taught to hold human life in absolute and supreme respect, can continue from any motive to use an agent *in itself* so poisonous and deadly, when another is at hand quite as good in anæsthetic power, and innocuous?

As if to tell the world that further argument is useless and that all else is to be thoroughly ignored, the same number of the *British Medical Journal* re-publishes the following "memoranda," which we copy to show what acknowledged dangers the British patient must be exposed to, to gratify a cherished prejudice of his countrymen. Would that "flipping with a towel," or a more powerful excitant, could awaken "the operator" to a truer sense of his duty, or possibly reach, if not calloused to another's risks, "even the heart itself."

So fearful is the picture therein presented that it makes one shudder merely to read the official—

MEMORANDA RESPECTING
THE ADMINISTRATION OF CHLOROFORM.

[*From the British Medical Journal, Dec.* 4, 1869.]

PRELIMINARIES.

1. Unless very feeble, the patient should fast for three hours before the inhalation.

2. Twenty minutes before the inhalation, a dose of brandy should be given in water—a teaspoonful to a child, one or two tablespoonfuls to an adult.

3. The patient should, whenever convenient, be wholly undressed, and, invariably, everything tight about the chest or neck should be removed.

4. If possible, let the patient be in the recumbent posture, and on his back. Let the chest and neck be well exposed. Whatever form of apparatus be used (a piece of lint, a handkerchief, and Skinner's inhaler, are perhaps among the best), there is little or no risk with the first inhalations; and the patient may be instructed "to draw full breaths." So soon as any effect is manifest, you must be more cautious. Watch carefully the respiratory movements, and

the color of the cheeks, lips, and eyes. When convenient, keep your finger on the wrist-pulse; but this is not essential. If the patient struggle much, proceed with increased caution.

SIGNS OF DANGER.

Lividity of Face.—Remove the chloroform, and let the patient have air. Open the mouth and draw out the tongue.

Stertorous Respiration.—Stop the chloroform, open the mouth, draw forward the tongue, and watch carefully.

Irregular Gasping Respiration.—Stop the chloroform, splash cold water on the face, and flip with the towel.

Feeble Pulse.—Proceed with great caution. If the feebleness amount to almost complete failure, stop the administration.

Death-like Pallor.—This, the most dangerous sign of all, must be met without a moment's loss of time. Flip with the wet towel on the cheeks, chest, abdomen, and limbs. Open the mouth, and if, as is usual, breathing has ceased, begin artificial respiration at once. With outspread palms, press the front of the chest forcibly down, whilst an assistant, at the same time, presses the abdomen. Make these movements not oftener than fifteen times in the minute. Air should be heard to enter the trachea. Whilst this is being done, let assistants continue most vigorously to flip the skin in all accessible positions—it cannot be done too much. If the collapse continue, let an ounce of brandy be injected into the rectum. Do not remit the artificial respiration until the patient is quite rallied. If the collapse persist, the efforts at rallying should be persevered with for an hour at least. If a large catheter be at hand, it may be well to introduce it into the trachea, and inflate the lungs by the mouth. Remember that irregular inspiratory efforts may occur long after death in all other respects has apparently taken place. Do not be deceived by them, but continue your efforts.

REMARKS.

The plan of artificial respiration recommended is, we believe, all things considered, the most convenient. The catheter in the trachea is, when practicable, the most effectual plan. Its introduction is not difficult. If the artificial inspirations be made too rapidly, they defeat their own object; nor should they be too forcibly made. If it be needful to continue them more than a few minutes, the operator will find it convenient to kneel astride the patient's trunk.

The administrator ought always to have with him brandy, an enema-syringe, and a large flexible catheter. He ought always, when convenient, to require his patient to be undressed, since it may be very desirable to have the surface accessible.

By "flipping with the towel," we mean twitching the corner of a damp towel in such a manner as to cause the sharpest pain possible. It is by far the most effectual method of awakening a chloroform patient, and should, in case of danger, be practised instanter, and at several parts at once. Its effect is to excite locally the capillary circulation, and indirectly to stimulate the respiratory muscles, and even the heart itself.

"WILL IT PASS?"

An early morning in June, 1857, a gentleman called at my office in a great state of trepidation and, almost breathless, told me that his wife had awoke with a sensation of suffocation, and desiring to swallow something which was sticking in her throat. It being so far down that it was impossible for him to get hold of it, she had, by violent efforts, swallowed it. He said it was a plate with six false teeth upon it, and fastened to the back teeth by two clasps, and asked if it would pass. I inquired if it was a *gold* plate, and he replied that it was.

I, very much to his surprise and satisfaction, told him that undoubtedly it would pass. He returned to his wife, and watched for the appearance of the gold plate. In three days he came to my office and reported that the teeth had not only passed, but had been replaced and were now masticating as formerly. The wife suffered no pain or inconvenience while the teeth were passing through the bowels, and only very little pain when passing the anus. The gentleman called a few days since, and said the teeth were still doing good service, and did not lose any of their original value by "swinging around the circle."

A. B. Robinson.

Boston Highlands, Jan. 24.

TREATMENT OF CROUP.*

A number of the *Journal für Kinderkrankheiten* has a lecture by Dr. Fabius, of Amsterdam, on the treatment of croup, from which the following is extracted.

Dr. F. never employs antimony, calomel or bloodletting; for, as he says, "the chief object in treating croup is to avoid debilitating remedies as far as possible." Ipecac is just as good an emetic as antimony; other purges are equally efficacious with calomel; bleedings are unnecessary. Of late years he has ceased to let blood in croup, and has been much more successful with his cases than formerly. An emetic, a warm poultice to the neck, and a large quantity of warm steam in the room, are his "abortive" measures. "In croup," he says, "this treatment brings relief; while in pseudo-croup it brings cure, or, as some say, it aborts croup."

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* This paper has been on hand for some time. This "croupy" weather brings it out.—Ed.

If false membrane has actually formed, Dr. F. contends earnestly against the use of antiphlogistics. Antimony is abundantly proved to have been the frequent cause of sudden death in young children. Sulphate of copper is also rejected by Dr. F. He declines to speak of chlorate of potash, but ascribes more efficacy to carbonate of potash. Luzsinsky, of Vienna, by whom the latter was employed extensively, claims to have saved by its means 75 cases of pure croup. Vogel, of Munich, gives it the preference over all other medicines; and Dr. Fabius says that he has had 12 successful and 3 unsuccessful cases under the use of this remedy alone; besides 5 successful ones where tracheotomy was performed. In doses of from ʒss. to ʒij. daily, diluted with water, it is not debilitating or dangerous. It should be noted that the carbonate—not the bicarbonate—is what is intended.

The effect desired of emetics is purely mechanical, to clear the air-passages. They may be repeated two or three times a day, so long as the stomach answers readily to the stimulus, and must be left off as soon as the act of vomiting seems no longer to relieve the respiration. Emetics, poultices, steam and carbonate of potash, are his remedies until tracheotomy becomes needful. "We ought to operate when the disease is becoming worse, and the difficulty of breathing greater; when the anxiety begins to be permanent, and cannot be removed by emetics; when the scrobiculus cordis and the region above the clavicles are drawn in upon inspiration; when, finally, double pneumonia is not present, nor any other inevitably fatal condition, and when the strength is not too far gone." He advises care in avoiding bloodshed, rather than rapidity in operating; care, he says, "like that required in making an anatomical preparation." D. F. L.

Selected Papers.

REPLY TO PROF. BIGELOW BY PROF. GUNN.

Editor Chicago Medical Examiner:—Allow me to reply to Prof. Bigelow's letter in the last number of your journal, in which he trusts that I will "acquit him of intentional justice." I sincerely wish that the character of his letter was such as to make it easy for me to do so. He opens with the following sentence:—

> "In a pamphlet which Prof. Gunn has rather widely distributed in this vicinity, and which has been brought to my notice since I recently returned from abroad," &c.

I trust that Prof. Bigelow did not think that I had omitted him in my distribution; for, I assure him, that I was more anxious to have him see my pamphlet, than any other one man; and I consequently mailed the first copy, sent out, to him.

As to the matter in controversy, it is a very simple question:—did I anticipate Prof. Bigelow several years in recognizing the influence of the capsular ligament, including the ilio-femoral ligament, upon the *dorsal* and *ischiatic* varieties of luxation? This is distinctly what I claim: in proof of which I quote from a short article which I published in the *Peninsular Journal*, in 1853. Speaking of dorsal dislocation, I used the following language:—

> "During the dislodgement of the bone, the superior and posterior portion of the capsular ligament is ruptured, through which the head protrudes; while, from the position of the limb at the instant of protrusion, *the anterior and inferior portion* is very much relaxed, thus allowing the head to rise easily over the rim of acetabulum. As soon as the head settles into its position upon the dorsum of the ilium, the direction of the limb is changed, and the untorn portion of the ligament becomes more tense, and, for this reason, the head of the bone cannot be readily returned to its place, till the limb is again placed in a position to relax it."

In the same article, also, I used the following language:—

> "This principle can be successfully applied to the reduction of the backward luxation of the femur into the ischiatic notch."

In 1856, I wrote as follows:—

> "The upper and posterior half of the capsule was then cut away, leaving the *anterior and inferior half whole*, and the round ligament was divided. In this state, it will be seen that *all tissues* are entirely out of the way (and could neither afford protection against dislocation, nor impediment to reduction), except the *anterior and inferior half* of the capsular ligament."

I think my position, taken in the above

quotations, covers, so far as *dorsal* and *ischiatic* luxations are concerned, the entire ground assumed by Prof. Bigelow, in reference to the *same dislocations*; notwithstanding, he says, that I "show no knowledge of the existence of an ilio-femoral ligament." (Courteous, certainly!) The *constituent* character of the ilio-femoral ligament, in relation to the capsular ligament, is proven, not only by the anatomy of the parts, and by reference to all anatomical descriptions of the same, but also by Prof. Bigelow himself, who says:—

> "The anterior part of the capsule of the hip-joint is a triangular ligament, of great strength."

I beg the reader to notice the force of the language "part of;" and I appeal to any surgeon, whether in speaking of the capsular ligament of the hip-joint, he has mentally excluded the ilio-femoral fibres.

Referring to my claim, Prof. Bigelow says:

> "Prof. Gunn should remember, that although the greater may, in one sense, include the less, as a block of marble does a statue, yet there is no sentence or word in his whole pamphlet which alludes to the existence of an ilio-femoral ligament in the capsule."

Now, let us take, for an example, the dorsal luxation: does Prof. Bigelow claim that the capsule is completely torn asunder, with the exception of the ilio-femoral fibres? If so, why "circumduct," so as "to rupture in this way the whole of the rest of the capsule?" If *not* so, I would suggest that Prof. Bigelow's pet statuette is not yet chiselled, and that truth is better represented in the block as I left it.

I make no claim to Prof. Bigelow's ideas, in reference to other dislocations. As to them, we differ widely. How soon, or to what extent, I may hereafter adopt them, time, observation and thought will determine. But if, in the two specified, we are so far asunder in our views of the *lesion*, and its influence, why does Prof. Bigelow take pains to state that he "first met" my "pamphlet" several years after my (his) own theory was made public?" I would suggest that this *naïve* remark is probably significant of Prof. Bigelow's own consciousness.

In addition to the above, permit me to append the following—I hope impartial and *strictly* fair—paragraphs, which I had already prepared as a postscript to my little pamphlet:—

> "The part played by the *anterior* and *inferior* portion of the capsule of the hip-joint, in its untorn condition, in *dorsal* and *ischiatic* luxations of the head of the femur, both in producing the characteristic phenomena of these lesions, and in opposing ordinarily directed effort to reduce them, was worked out by process of thought *and experiment*. But the idea, that in downward and forward luxations, the *upward* and *backward* half of the capsule remained untorn, and that, in forward luxations, the *posterior* half was unlacerated, was reasoned out, both from analogy and the manner in which these accidents occur. But no experiment was instituted to prove the position taken. I was, therefore, unprepared, in issuing this edition, to either take issue, or coincide with Prof. Bigelow's assertion, that the ilio-femoral portion of the capsule remained intact, in all the four standard dislocations of the hip-joint.
>
> "I have, however, since then, in preparing to illustrate my lectures on this subject, during the current session, resorted to the following experiments, to wit:—
>
> "A fresh, middle-aged subject was selected, upon which I first produced the forward luxation. The characteristic signs were present. I dissected away the integument and superficial fascia. The fascia lata was found lacerated from its attachment to Poupart's ligament, and through the fissure was seen the shining surface of the femoral head; clearing away this fascia, the sartorius was found overlying the trochanter major; the psoas magnus and iliacus hugged closely the outer extremity of the neck. The head lay upon the origin of the pectineus, the outer edge of which was lacerated. Dividing and reflecting these muscles, the anterior surface of the neck and head of the femur are entirely exposed. The capsule *was completely torn from the whole anterior intertrochanteric line*, including the re-inforcing fibres of the ilio-femoral, and split to its acetabular attachment.
>
> "Upon the other side, I effected a downward luxation upon the obturator foramen. An examination revealed extensive rupture of the capsule, upon the side adjacent to the foramen, and an *intact condition of the ilio-femoral* and of the capsule opposite to the rupture. Careful inspection of the mechanism of the untorn portion of the capsule, including the re-inforcing fibres of the ilio-femoral, revealed the fact, that the attachment of the upper end of the ilio-femoral being so far *above* the socket made its influence identical with that of the upper and untorn portion of the capsule proper. In *mechanical effect*, the ilio-femoral may be regarded, in this accident, as a constituent part of the *upper* portion of the ligament. Experiment, also, confirmed the correctness of my directions as to the method of reduction."

I would also remark, upon Prof. Bigelow's mode of reduction, that he seems to regard the ilio-femoral as the only thing of importance or use about the joint, and proceeds to "circumduct" and tear the rest of the capsule "with impunity." Perhaps the injuries already sustained by the joint may be generally added to "with impunity;" but would it not be better and more surgeon-like to avoid further laceration? I confess that I can see but little to choose, between the application of power, by means of the pulley, or by means of the lever (which latter is essentially Prof. Bigelow's mode), only, that by the latter plan, greater speed and efficiency are attained, by a more advantageous application of the power used. Of the two, the latter is capable of the greater mischief, and both are too barbarous to be resorted to, in most cases of recent luxation. MOSES GUNN.

PUERPERAL FEVER TREATED BY INJECTION OF AMMONIA INTO THE VEINS. COMPLICATION OF PREGNANCY WITH OVARIAN DISEASE.

AT the Obstetrical Society of London, Dr. Tyler Smith read a paper on a case of puerperal fever treated by the injection of ammonia into the veins, followed by recovery. The patient, a primipara, was delivered by forceps on November 1. On the 5th symptoms of puerperal fever supervened, and on the 12th she was in such imminent danger that Dr. Smith determined to try the injection of ammonia into the veins, as practised by Dr. Halford in Australia for snakebite. The operation was performed at 7.45, P.M. A solution of one part of liq. ammoniæ to three parts of water was injected to the extent of half a drachm into one of the veins of the right forearm. As soon as two or three drops had been injected she roused, and complained of severe pain in the opposite arm. When the operation was completed there was very great pain over the whole body, with intense smarting of the right arm. This continued without abatement for several hours. The sickness ceased at 11, P.M., but the bowels were moved four times in the course of the night. Towards morning the pain subsided, and she got a little sleep. November 13.—The abdomen had much diminished in size, and the pulse had fallen to 100. 14th.—Expressed herself as feeling better, and was quite sensible, though pale and weak. Pulse 108. Right arm at seat of puncture red and swollen, and the veins of the arm were distinctly mapped out. Was able to take a little food without sickness. 15th.—Tongue getting natural; pulse 100; abdomen less in size. 17th.—Still progressing favorably; a small ulcer had formed on the right arm at the seat of puncture. A slight relapse occurred on the 20th, but after the 22d her improvement was uninterrupted. In commenting upon the case, Dr. Smith observed that he had never seen a patient in a similar condition recover, and, although he had as yet adopted this treatment in this case alone, so successful was the result that he had felt it incumbent upon him to bring the particulars before the Society. He would not at present offer an opinion as to whether the ammonia acted as an antidote or stimulant.

Dr. Aveling would have liked a fuller account of the history of the plan of injecting medicinal fluids into the veins, as it was a method of treatment of much antiquity.

Dr. Barnes said reference to the history of venous injections did not diminish the merit of applying this method to the treatment of puerperal fever. In this disease it was often difficult to get remedies absorbed; the only hope seemed to be in direct injection into the vascular system. He then adverted to the practice of saline injections in cholera, by which many lives had been saved. At the last meeting of the Society he had stated his opinion that the injection of saline fluids and transfusion ought to be, and would be, largely extended; and in his work on obstetric operations, now through the press, he had advised it in certain cases of puerperal convulsions, fever, and obstinate vomiting. He doubted whether the fluid used by Dr. Smith was the best. He should prefer a fluid like Dr. Little's, made of similar specific gravity to that of the blood, adding a little ammonia and alcohol. He thought the indication was to carry the ammonia in a considerable bulk of fluid, not concentrated.

Mr. Spencer Wells said he had been much struck by Dr. Halford's reports, and last March he had injected half a drachm of liq. ammoniæ into one of the veins of the arm of a woman two days after ovariotomy. The pulse and temperature had risen to 140 and 102·8°, with the usual signs of fibrinous deposit in the heart. Scarcely more than a momentary revival followed the injection, nor more after another by Dr. Junker two hours afterwards. A large fibrinous clot was found after death filling up the left ventricle. Mr. Wells suggested that if Dr. Smith's example is followed, great care should be taken only to inject ammonia where there is an excess of fibrine in the blood; to inject it in cases of any low form of fever or blood-poisoning, where the breath exhaled is charged with ammonia and the blood is already too fluid, would be excessively dangerous.

The President observed that the Society was much indebted to Dr. Tyler Smith for bringing this interesting case forward. One swallow did not make a summer, but new facts were always deserving of attention.

Mr. T. Spencer Wells read a paper on the Complication of Pregnancy with Ovarian Disease. The author related fifteen cases of pregnancy complicated with ovarian disease which had fallen under his own observation, restricting his remarks to questions of treatment. In three cases sudden death followed spontaneous rupture of the cyst in or before the seventh month of pregnancy. In two cases pregnancy and ovarian disease went on together without interference, and lingering labors ended in the birth of stillborn children. In one case twins were born alive ; but the mother had suffered greatly from distention. In one case five and in another six pregnancies had gone on, and ended normally without interference, but in the last case the cyst ruptured spontaneously in the seventh pregnancy. Five patients were tapped during pregnancy—one twice, one three times, and three once. In all five living children were born after natural labors. In one of them ovariotomy was successfully performed four months after delivery. In one case ovariotomy was performed in the fifth month of pregnancy; the uterus was emptied at the same time, and the patient recovered. In the concluding case of the series ovariotomy was performed successfully in the fourth month of pregnancy, after spontaneous rupture of the cyst and peritonitis, pregnancy proceeding without interruption. The author believed that a careful consideration of these cases would lead to the following conclusions :—1. Pregnancy and ovarian disease might go on together, and end safely both to mother and child. 2. But in a large proportion of cases, probably in nearly all where the ovarian tumor was large, there was danger of abortion, or, if the pregnancy proceeded to the full term, of lingering labor and a still-born child ; and throughout the later months of pregnancy there was danger of sudden death to the mother from rupture of the cyst or rotation of its pedicle. 3. Spontaneous premature labor might not save the mother from these perils ; and the induction of premature labor almost implied sacrifice of the child, with considerable risk to the mother. 4. There was no proof that tapping an ovarian cyst was more dangerous during pregnancy than at any other time. It would generally afford immediate relief to distention, and lead to the normal termination of pregnancy in the birth of a living child at a very slight risk to the mother, if proper precautions were taken to prevent the escape of ovarian fluid into the peritoneal cavity, and the entrance of air into this cavity and into the cavity of the cyst. 5. If an ovarian cyst should burst during pregnancy, removal of the cyst and complete cleansing of the peritoneal cavity might save the life of the mother, and pregnancy might go on to the full term. 6. Of three cases on record, where a pregnant uterus had been punctured during ovariotomy, the only recovery was in the one case where the uterus was emptied before the completion of the operation.

Dr. J. Braxton Hicks then read a short account of six cases, comprising eight pregnancies where pregnancy was associated with ovarian cystic disease. In none had any symptoms of danger arisen, and all were delivered of live children at full term. Dr. Hicks also mentioned that he had never seen any other case with this complication attended with untoward symptoms. He thought a collection of a larger number of cases necessary, before the necessity for the induction of premature labor could be established as a rule.

Dr. Bathurst Woodman referred to the bursting of thin-walled cysts as not uncommon where there was no complication with pregnancy, and considered that the relative frequency of a favorable or unfavorable result in such cases was an important element in the discussion of the present subject

Dr. Playfair referred to the complication of labor with ovarian tumor, of which he had collected the details of fifty-seven cases. Of these fifty-seven thirteen had proved fatal ; and this mortality was probably due to the contusion to which the tumor was subjected during the pains. Every case in which the cyst had been punctured (seven in number) had done well.

Dr. Wiltshire asked Mr. Spencer Wells if he would kindly tell the Society how he would treat cases of solid or semi-solid ovarian tumor complicating pregnancy. Tapping, though useful enough in unilocular cysts, would in such cases be nearly useless.

Mr. Bateman, after referring to the case in which he was engaged with Mr. Wells, gave some particulars of a case of ovarian tumor obstructing labor, and necessitating craniotomy, which had occurred in his practice many years ago. About three weeks after her confinement the patient succumbed to an attack of erysipelas.

Dr. Barnes, in reply to Dr. Wiltshire, said the practical rule was, when the tumor obstructed labor, act upon the tumor so as to free the passage for the child; when this could not be done, then act upon the child.

Mr. Spencer Wells said, in reply, that he could not see why an ovarian cyst should not be tapped during labor. In the case of a multilocular cyst, probably one of the largest cysts might be emptied by tapping. If not, and the whole tumor was more or less solid, the case would then be one for careful consideration, and the question of instrumental delivery, the Cæsarean section, or ovariotomy would have to be determined by the circumstances of the case.—*Medical Times and Gazette.*

Reports of Medical Societies.

MEDICAL TESTIMONY AND EXPERTS.

A REPORT TO THE SUFFOLK DISTRICT MEDICAL SOCIETY.

The Committee of the Suffolk District Medical Society, appointed last winter, with instructions to consider and report on the subject of

Medical Testimony and Experts,

herewith present their final report upon the questions, as originally submitted to them, and as recently recommitted to them for a more detailed examination.

The Committee are fully aware of the importance of the questions, and at the same time are conscious of the many and great difficulties that surround the proper consideration of them. These difficulties have of late years exercised the thoughts of some of the best minds in the medical and legal professions. They have been discussed by individuals and by social science associations in Europe and America. It is very evident that some change must eventually be made in the present mode of investigating civil and criminal cases involving questions that require scientific or skilled witnesses to testify upon matters of science or art, and of which the court and jury may know little or nothing previous to the trial. The rapid advances made by science and art require that experts in these departments should be summoned in order to aid those who are finally to decide the cause. As at present conducted, this custom of summoning experts may actually lead to error rather than truth. This is especially liable to occur in civil actions, as we shall endeavor to show in a subsequent part of our report.

Under a vote of this Society, your Committee was directed to ask the American Academy to appoint a similar committee, with the idea of a joint appeal to the Legislature for the enactment of a law upon the subject. The Academy appointed the Hon. Emory Washburn, Hon. Joel Parker of the Dane Law School, Prof. Horsford, E. B. Bigelow, Esq., and Dr. H. R. Storer.

After a long and ample discussion of the whole matter by this joint committee, and amid grave doubts whether *any law* would meet all the contingencies, it was unanimously voted that Hon. Emory Washburn should draw up a bill and present it to the Judiciary Committee of the last Legislature, and urge its passage. This was done, and a draft of the proposed bill is herewith appended. Judge Washburn appeared before the Committee and urged its adoption. It, however, never came to light afterwards. We know of no reasons for this, nor is it necessary for us to seek for any. But it is for the Society to decide whether it will again urge the passage of the law proposed by the Committee, or of some other of a similar character, or allow the whole to go by default. Your Committee would suggest that a copy of the law be entered in full upon our records for future reference.

The Committee ask permission to lay before the Society some of the arguments and facts, *pro* and *con*, in reference to the whole subject of experts in courts of law.

Let us suppose that in a civil case a question is to be brought before a court about which neither the judge, counsel nor the jury can know but little. Moreover, it is so intimately associated with some peculiarity of science, or of art, or of fact, that it would be impossible for either of these parties to learn much, if they can learn anything, upon the subject during the short period of the trial of any cause. Still further, there are causes for the proper elucidation of which a long series of scientific study or of experiment is needed. To meet such a case the following course is usually pursued. Either party in the cause has the right to employ any one he may choose as expert. If the case involves large interests, the wiser and wealthier party generally engages a sharp-witted man of science, and tells him what it is desirable for science to prove in order that he may gain his point. Under such circumstances, however learned or honest the expert may be, his mind will be inevitably inclined to bring all his energies to bear upon the idea of success for his employer rather than to learn the exact truth in regard to the entire subject.

By study and experiment he may thus be enabled to bring a great amount of learned evidence, and apparently quite overwhelming in behalf of his patron. But if the opponent in the cause has been equally wealthy and wise in the world's ways, and has also engaged for his side of the question some scientific rival, there may be an equally scientific display on the other side. Between these two witnesses the minds of the jury are clouded rather than enlightened. They have not been trained to such studies. They do not see the fallacies that perhaps lie under both displays, and they at times seem to forget that self-interest has perhaps marred the testimony of both witnesses. The discrepancy between the two may be easily seen, but no light comes from them. The result sometimes is, that the jury ignore altogether the scientific evidence, and decide according to what some persons call the dictates of *common sense;* while others, adepts in the science involved in the question, style it the *veriest nonsense.* All the while that this battle of the giants is going on, no one hints aloud that the strong element of self-interest is perhaps underlying science and really warping both witnesses. Both should therefore be treated as common witnesses, and be closely cross-examined. To have this performed effectually it should be done by their peers, viz., by experts trained in the same science or art, but speaking through the mouth of the judge or either of the advocates. Hence it would be most appropriate that the judge should have the right to summon men skilled in this special training, either thus to question others, or to give their own opinions upon the matter in dispute. Such men would come untainted with the breath of suspicion of favoritism, or of self-interest, leading them to favor one side or the other of the question in dispute. If this be true, should not the Legislature, *pro bono publico*, assume the right to require of any person learned in any branch of knowledge to give his opinion, either in open court or upon written testimony, and thus enable the judge and jury to act understandingly in the premises? This is what the law, suggested to the last Legislature by the Joint Committee of this Society and of the Academy, proposed to give to the judge.

The preceding remarks on the clashing of the testimony of experts in any civil case may not apply exactly to the processes usually pursued in a criminal cause. In this latter case the expert called by the State is supposed to be, and really ought to be, above the suspicion of favoritism; for the theory of such a trial is, on the part of the State at least, to get exact truth and to administer exact justice. Hence, when a learned man is called upon by the State Attorney to investigate the facts, he has no reason for wishing to arrive at one conclusion rather than another. But even in criminal cases very discordant opinions are sometimes advanced. The immediate cause of the raising of the present committee was the remarks made by the presiding judge in a criminal trial. It is undoubtedly true that under the present initial processes of the law, matters for examination may be placed in the hands of an ignorant or unreliable so-called expert by some distant country magistrate, policeman, or coroner, entirely unfitted to make such selection, before the affair in question comes to the knowledge even of the Attorney-general or any competent law officer. This necessarily brings into the case at trial a person who should have no connection with it, or may even prevent its investigation by other and proper skilled and reliable persons. In other countries, only those authorized officially by the courts or high authorities can be employed in the investigation of criminal cases.

Among the objections to giving this power to any judge may be cited the following:—

It is contrary to the usual custom in our community to compel a man to testify to the *opinion* he may hold on any subject. That opinion is considered as something sacred, and which the State has no right to demand of any one. It is his property, and as such no one, not even the State, has a right to take it from him. But is this assertion really tenable, when considered in the light of the rights usually claimed by the State? The sovereign has always asserted, and has now gained the right to demand of a man, the free confession of all of his knowledge about certain facts bearing upon matters important to the public welfare, and about which the witness is supposed to know what others do not. The State can take the property of any one for the public good. During the late rebellion even life itself was often taken for the safety of the Republic. Your Committee cannot see how any rights are invaded more in the case of a learned man, who is required to give his opinion merely in a certain cause, than in another case where life itself is taken without scruple. It is true that the necessities of the attending circumstances may be undoubtedly greater in one case than in the other. Nevertheless, human life may be at stake in both cases, and if the argument hold good for one it ought to hold for others where perhaps human interests alone are at stake, inasmuch as they become at times quite as important as life itself.

The payment of such scientific or learned experts, when summoned by the judge to give their opinions and render essential service to the State in its courts of justice, should be proportioned to their high skill, and to the time and trouble involved, and subject to the approval of the Court that should summon them.

If such an aid should be granted to the Court in any case where hired opposing athletes in science present their opposite opinions and reasoning, or in criminal cases, where such high advice is needed, it is evident that such are and will be still more necessary in those grave cases where no expert has been called, or in those in which individuals claiming to be experts, but without a single qualification justifying their assumption of that title, may give evidence and may state opinions wholly erroneous, whereby the property and possibly life of a citizen may be endangered. In one or all of these contingencies it would seem most important for the sake of justice that the Court should have the power to summon any one it may choose to aid in the determination of a case.

Your Committee, therefore, cannot but regret that no provision has been made by the Legislature for this purpose.

The Committee deem this a fitting occasion for them to bring before the members of the Profession certain facts connected with the present mode of conducting trials, and at the same time they will take the liberty of suggesting some evident rules of conduct, which, as it seems to your Committee, might well be followed by any professional man when called upon the stand.

A medical witness would do well to remember, 1st, that no one has a *right*, as the law now stands, to ask an *opinion* of him. 2d, that, if asked for an opinion, he may refuse to give it; and 3d, that in order to throw doubt on his testimony the opposing counsel will, at times, endeavor to entrap him into the expression of an opinion, and afterwards, by subsequent questions, to lead him to absurd conclusions, whereby his testimony, although strictly accurate, may be made to appear wrong in the eyes of the jury.

4th. In the statement of facts your Committee believe that it would be well to be as brief as is consistent with clearness. Moreover, the witness should, as far as possible, avoid all technical language. For example, a witness when about to instruct a jury will lose credit for clearness of statement, and may darken the minds of the whole court, by telling of the *scapula* instead of the shoulder-blade, or using *clavicle* for collar-bone, *sternum* for breast-bone, &c.

5th. If he be not sure that he is really an expert in the matter in hand, he should beware of going upon the stand at all. If he do so, he deserves and probably will get a severe castigation from opposite counsel, and he has no right to ask sympathy from his professional associates. He cannot blame lawyers for even apparent rudeness in their attempts to prove him before the jury to be the ignoramus he really is.

6th. A medical man should beware of allowing himself to be called into court save as an independent witness, to give evidence upon "the truth, the whole truth, and nothing but the truth." Your Committee know of no act of villainy greater than that which a scientific man commits when he voluntarily takes the witness-stand, and then fails to act upon this noble rule. Yet this has been done in Massachusetts, and may be done hereafter. If on cross-examination the perjured scientist have sufficient coolness and the opposing lawyer little wit, he may escape detection, as he has escaped before. Under the present law the Court cannot summon any one of his peers to catch him in his wordy windings, and he may thus escape the righteous indignation that would arise were his fraud discovered by the community he thus outrages. Such men actually at times may pervert justice. As pertinent to these remarks the Committee would cite the following remarks made by the present Lord Chancellor of England, in reply to questions put to him by the Committee on State Medicine of the General Medical Council of England.* "Every witness should eschew altogether the notion of partizanship. He should be ready frankly and unreservedly to give his opinion, regardless of how it may tell. He is there not as an advocate, but in order to inform the court and jury according to his best judgment."

This is undoubtedly true doctrine. Your Committee believes that a really truthful expert will be fully alive to the honorable and important position that he will hold. He will come prepared not merely to tell the whole truth, but to see that none of it is hidden through his evidence. He will be careful to prevent if possible any question being put to him which by answering categorically may hide a part of the truth, and if he perceives that counsel have that aim in view he will answer with sufficient detail to reveal the truth in its wholeness. He will endeavor that no false interpretation shall be put by counsel on the facts presented by himself or others. And if opportunity be afforded him he will explain all facts in such a way as to make the truth appear in the fullest light.

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* Med. Times and Gazette, Nov. 13, 1869.

7th. The conceit and desire for self-glorification of some experts produce evil results. They deliver themselves more like professors from their chairs of instruction, and sometimes talk with less precision than is required in a court of law. Such exhibitions are apt to afford ample opportunity for subsequent criticism on the part of counsel.

8th. Some while on the stand seem to forget the great difference there is between the statement of a fact or of a series of facts, and the inferences that may be made from these facts. The facts should be given, the inferences may be left to the wisdom of the court or jury to make. If the witness makes them he does so at the risk of severe criticism.

8th. Some really scientific men are so prejudiced that the simple fact that another with whom they may have had some previous antagonism has expressed an opinion, will induce in their minds a tendency to a belief precisely the reverse of that given by the opponent. Nothing can more effectually prevent one from arriving at exact truth than this mental quality, if brought to the witness stand.

There is one other topic on which your Committee feel called to make some remarks—viz., the relations of the lawyer to the expert. While human nature exists as at present, it may be feared that we shall never arrive at perfectly satisfactory results, even if we get these wisest of men for experts. However wise and truthful the witness may be, he cannot be sure while on the stand of not meeting *unwise* or *unprincipled* lawyers. One of the sovereign ideas of the law is that there are always two sides to every question, and another is that it is the bounden duty of each advocate to present his side of the question in the best light, and if possible in a better light than that of his antagonist. If, therefore, in conducting an important trial, it appear obvious to an able but *unprincipled* lawyer that he can gain any advantage by browbeating a witness, he will be very likely to try that method. If by any trickery of words he can make his opponent's witness stumble, he will be likely to try to make him do so even at the expense of truth. Nay, more; we fear that it must be admitted that some lawyers who rank high as gentlemen and men of honor in the community, and who, in their dealings with men in common society, would not dare to use words of *insult* to others when off the stand for fear of personal violence from those thus attacked, will within the sacred precincts of a court of justice indulge at times in remarks worthy of Billingsgate. By *insult* and sharp and repeated questioning, or by inuendo they will endeavor so to confuse or irritate a witness that perhaps some unlucky admission will be made by him. This is all that is wanted, and the expert will be made to appear ridiculous, and his testimony may thus become of little or of no avail in the minds of the jury. On such an occasion, therefore, it is of paramount importance for the witness never to lose his self-possession, and if he can give the retort courteous to the advocate it will be fortunate. And above all else he must be sure of not going in his evidence beyond the bounds of strict truth. Preserving that as his basis whereon to stand, he may defy all such attempts to upset his testimony. If he find himself pressed by repeated and what he perhaps may think *absurd* questions, for the obvious purpose of confusing and degrading him, he may appeal to the Court, or decline further speech, ever remembering that it is better for truth's sake for him to avow ignorance enough to be unable to reply to unwise questions, and decision of character and self respect sufficient to enable him to refuse to answer one that is put for the purpose of confusing him. Such a witness will command the respect and close attention of all the court. The ungentlemanly lawyer will not dare to attack him for fear of equally sharp replies to any questions offered. The honorable advocate will not wish to attack him. The judge will greet him as a co-worker and as a most efficient aid to himself in the careful and thorough unravelling of all the intricacies of the case in hand, and upon the proper and just investigation of which, perhaps, depend all the solemn destinies of life or death of a human being.

To establish a system whereby such an expert could be summoned by a court to aid it in its high duties is an object devoutly to be wished for by every one. Whether we shall ever get a law establishing such a system remains yet in doubt. Wiser men in the eyes of the community than the Joint Committee of the two Societies, viz., the Judiciary Committee of the last Legislature, have apparently decided that nothing can be done towards obtaining it. Your Committee do not believe that all wisdom is centred in the Legislatures of the past. They hope much from the future. Whenever a great evil exists, then and there close beside it, though invisible for a time, lies undoubtedly its antidote. We must look for it, however, or it will not be found.

Meanwhile, we have only to discuss all questions having relations thereto in the full conviction that under the light of human reason we shall eventually obtain all all and more than we now ask for.

With these remarks the Committee ask to be discharged from further consideration of the subject.

Henry I. Bowditch,
Henry W. Williams,
F. Minot,
George Derby,
R. M. Hodges,
James C. White,
Com. of the Suffolk Dist. Med. Society.

Draft of a Law prepared by Judge Washburn in behalf of the Joint Committee from the Suffolk District Medical Society and the American Academy of Arts and Sciences, and presented to the Judiciary Committee of the Legislature of Massachusetts at session 1868–69.

"When a cause is at issue in any court, in which issue is involved any question of art, or skill, or science, which may in the judgment of the court render it necessary or desirable to examine experts as witnesses in the trial thereof, the court may in their discretion appoint and require the attendance of one or more persons to be examined as such experts, and may allow to such person or persons such sum or sums for fees as witnesses as to said court may seem reasonable and proper, to be charged and allowed as costs to the prevailing party, if he shall have paid the same, unless the court for good cause shall otherwise determine. And the court may in their discretion require of the parties, or either of them, to advance and pay to the person or persons thus appointed all or any part of the sum or sums so allowed before the trial of any such issue be begun or proceeded with."

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

AN APPEAL TO CONGRESS.

The Medical Society of the District of Columbia, at their meeting held January 12th, 1870, appointed Drs. Lovejoy, Toner and Lieberman a committee to draft a statement of facts explaining the status of the Medical Society of the District of Columbia, with reference to the proposed action of Congress for the repeal of its charter. That committee made the following report, which was adopted and ordered to be published:—

AN APPEAL.

The Medical Society of the District of Columbia, which has existed in this community for more than half a century, having been lately assailed, and a resolution, founded upon statements evidently derived from sources at once malicious and false, having been introduced into the Senate of the United States to repeal its charter, in the following terms:—"*Resolved*, That the Committee on the District of Columbia be directed to consider the expediency of repealing the charter of the Medical Society of the District of Columbia, and of such other legislation as may be necessary in order to secure for medical practitioners in the District of Columbia equal rights and opportunities without distinction of color;" this society deems it respectful and due to its own dignity to give a public explanation of its actions in order that it may be exonerated, in the opinion of all just men, from the charges which have been brought against it by designing and interested enemies.

It has been charged that this society has, with prejudice and a tyrannical exercise of the powers conferred on it by its charter, refused to certain individuals chartered rights which they could equitably demand.

The falsity of this charge will be apparent upon an examination of the provisions of the charter.

1. The charter requires that the society shall elect a board of examiners "whose duty it shall be to grant licenses to such medical and chirurgical gentlemen as they may, upon a full examination, judge qualified to practise the medical and chirurgical arts, or as may produce a diploma from some respectable medical college or society."

2. It imposes a penalty upon any one venturing to practise without such a license.

3. It forbids the society "in anywise to

regulate the practice of medical or chirurgical attendance on such persons as may need these services, or to establish or fix a tariff of charges for medical attendance or advice, or to interfere, in any way, with charges or fees for medical attendance or advice."

1. The privilege is given by the same instrument to the society that its members "MAY elect into their body such medical and chirurgical practitioners, within the District of Columbia, *as they may deem qualified to become members* of the society.

With respect to the first of these—that is, license after examination—nearly every respectable practitioner of medicine who has settled in this District desirous of fulfilling the requirements of the law, has applied for and received the license from the board of examiners, and in no case has this license been refused to a person passing the required examination. Even the colored physicians who now complain have received their license immediately after examination and payment of the fee invariably paid by all applicants for license. The board has granted the license in every instance, without any distinction or restriction when the proper qualifications have been ascertained to exist.

2. The Society has on very rare occasions deemed it expedient to have the legal penalty inflicted upon persons for practising without the aforesaid license, and then only for the protection of the public against notorious and swindling quacks.

3. The Society has never, in a single instance, by forbidding consultations or restricting them in any way, infringed that provision of the charter forbidding interference with "the regulation of the practice of medical attendance." But, debarred from the exercise of these powers in the Society, the medical practitioners of this District many years ago organized a voluntary society, known as the Medical Association of the District of Columbia, and in that association have made regulations with respect to medical ethics, including the regulation of consultations, fees, &c. The regulations of this voluntary association have been confounded with the acts of the Society, and the latter body is thus made to bear the credit or the odium of regulations not properly chargeable to it. The existence of this second body, the Medical Association, is not fully known by the public or some of the profession as it should be, and in the charges made against the Society in Congress there was a marked evidence of this confusion.

4. By reference to the fourth provision of the charter, as stated above, it will be seen that membership is not a right compulsory on the society to grant when applied for, and that the society has, in fact, in the exercise of its legitimate right on more than one occasion, rejected candidates for membership; and it has thus refused those individuals, not as a right which they could demand, but a benefit which it was optional with the society to bestow.

Every man, be he Chinaman, Choctaw or African, whether he may think proper to practice hydropathy, sorcery, homoeopathy, clairvoyance, or any other form of quackery, has a right under the law to demand of the board of examiners a license or certificate on presenting a diploma from a respectable medical college or passing the required examination. It would therefore be absurd to insist that every licentiate should necessarily be entitled to the privileges of membership, which, briefly stated, consist of social reunion for medical discussion, and the election of officers annually.

The medical society for a series of years has held weekly meetings for the discussion of medical subjects, and these meetings have been of the nature of social reunions, and of course each member has exercised his right in the selection of his associates. To question his right to vote in the election of members as he may deem proper would be an unwarrantable infringement of his franchise.

Shall the existence of the society be threatened because a majority of its members have held and acted upon the belief that the admission of certain persons as members would render the attendance upon these meetings so distasteful as to insure their cessation, and thus, far from benefiting the complainants, destroy the usefulness of the society?

In fine, the license from the board of examiners conveys all the *rights* which this society can confer. The privilege of membership is merely a privilege of association and social reunion, and it is for entrance into this social reunion that the friends of the colored physician are clamorous, and not only threaten to destroy the society unless admitted, but have boldly demanded, in public meeting, that the charter be taken away from the society; and among the prime movers in this attempt to effect the destruction of the society are certain individuals who have settled amongst us of late, and received the courtesy of its members; yet, while retaining their membership, they are plotting its destruction.

It will thus be seen that the charter secures to all medical practitioners, without distinction, rights dependent only upon certain moral and intellectual qualifications, and that the society has never desired nor attempted to interfere with or deny those rights. It will also be seen that it leaves the question of membership as one of optional and social association.

This society does therefore most solemnly, in the presence of the public, protest against a tyrannical attempt to punish it for the exercise of an undoubted and legitimate right, and in the absence of any express legislation to meet the emergency, the opposition to which might then be justly chargeable to the society as a misdemeanor.

Signed by W. P. Johnston, M.D., *President;* Wm. Lee, M.D., *Secretary;* J. W. H. Lovejoy, M.D., C. H. Liebermann, M.D., J. M. Toner, M.D., *Committee.*

NATIONAL MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Memorial of the National Medical Society of the District of Columbia to the Senate and House of Representatives of the United States. Whereas it has been stated in a published circular that the persons endeavoring to form a medical society on the basis of "equality before the law" have maliciously and falsely attacked the Medical Society of the District of Columbia, we deem it but just to the public, as well as ourselves, to make the following statement of facts:—

Within the past few years some colored physicians, regular graduates of medical colleges, and of untarnished character and reputation, having held positions as surgeons in the Union army during the rebellion, have settled in this city and secured to themselves a large professional practice.

There being only one medical society in the District where all licenses to practise must be obtained, and all advantages flowing from medical and professional discussions were to be enjoyed, it became the duty of these colored physicians to obtain license and membership, in order to keep up their medical education, and derive all the advantages from weekly professional discussions.

The Medical Society of the District of Columbia has, on two different occasions, refused to elect these colored physicians to membership, acknowledging that the color of the candidates was the reason for so doing, and some of its members have refused to consult with them because they were not members of the Society.

This was in June, 1869. Hoping that discussion of the subject would aid in securing justice, we were content to await the result.

January 3, 1870, by a vote of 26 to 10, the Society refused to consider a resolution offered by Dr. Reyburn, which read as follows, viz:—

"*Resolved,* That no physician (who is otherwise eligible) should be excluded from membership in this Society on account of his race or color."

Some of the present officers of the Society have refused to consult with the colored physicians, but instead thereof, have taken charge of patients who were under their care, without giving them the customary notice of their dismissal, in direct violation of the ethics of the profession.

These colored physicians have applied to the Society for membership, but were rejected, by a large majority, although the Board of Examiners reported favorably on them. At the last election of officers in the Society, held January 3, 1870, the chairman of this board was removed, and a gentleman, late of the Confederate army, well known for his opposition to the admission of colored physicians, was elected in his place, thus insuring their future defeat. Other gentlemen who served during the war in the Confederate army are now prominent in the control of its affairs.

At the same meeting, a white candidate, a gentleman of high professional standing, and occupying an important official position, was objected to, solely on the ground that he was believed to be in favor of the admission of colored members.

Again, the circular published by the committee of the Society, states that their weekly meetings are "social reunions." These meetings are conducted under strictly parliamentary rules, from the opening to the adjournment, and only professional questions, essays, and papers, are brought forward for discussion, *and gentlemen are even required to obtain permission of the President to retire from the meeting.* If these meetings, held in compliance with the charter of the Society, are only social reunions, then the meetings of all bodies not strictly parliamentary are social reunions.

Other colored men will soon graduate from medical colleges in the United States and throughout the world, and their rights should be protected and guaranteed within this District.

It is a fact worthy of note that this is the only country and the only profession in which such a distinction is now made. Science knows no race, color, or condition, and we protest against the Medical Society of the District of Columbia maintaining such a relic of barbarism.

We, for the reasons stated, and in accordance with the spirit of the times, ask Congress to grant a charter to a new Society which will give all rights, privileges and immunities to all physicians, making only the presentation of a diploma from some college recognized by the American Medical Association, and good standing in the profession, the qualifications necessary for membership.

Signed by Robert Reyburn, M.D., *President;* C. Adams Gray, M.D., *Secretary;* and Drs. J. G. Stephenson, A. T. Augusta, D. W. Bliss, S. L. Loomis, —— Purvis, R. J. Southworth, J. T. Johnson, J. E. Mason, *Committee.*

Medical and Surgical Journal.

BOSTON: THURSDAY, FEBRUARY 17, 1870.

RESPIRATION OF THE TISSUES.

Respiration of Turtles.—A LEADING article of the *Gazette Hebdomadaire* gives an account of some recent researches of M. P. Bert upon the subject indicated above. We translate portions of it.

Our classical treatises are almost entirely silent on the question of the respiration of the tissues, which was started in the last century by Spallanzani. The celebrated physiologist of Pavia sought to elucidate, though in a rudimentary manner, the mode of interchange of gases in the system. He contented himself with reciting without commentary the experiments which he had made, and which it would hardly be worth while to recount, in view of recent results much more complete. Matteuci, Liebig, Valentin, Hermann (the last quite recently), have made researches in the same direction, confining themselves, however, to a single tissue—the muscular.

Hermann recognizes in what he has denominated muscular respiration nothing more than a phenomenon of cadaveric decomposition—a theory which is impaired by the direct experiments of M. Bert. According to the latter experimenter, the work of oxygenation in a muscle completely detached from the body represents a function which is not passive; for it is incontestable that the detached muscle retains its vital autonomy for a certain length of time, and that fact is superabundantly demonstrated by the variability which occurs in muscular ingrafting. Carrying the investigation further, M. Bert applies his experiments to all living tissues. The results he has reached with vegetable matter will not detain us. Suffice it to say that they are somewhat opposed to the opinion of Saussure upon the distribution of oxygen in the different parts of the plant.

As to animals, the direct experiments of M. Bert demonstrate not only that the anatomical elements assimilate oxygen in different quantities, according to the functions incumbent upon them; according to their degree of vitality, and according to their intimate composition; but also determine, quite approximately at least, the proportionate degree of respiration in the different tissues of the same animal. This proportion varies very little between one animal and another of the same species. The animals used in these experiments are always killed by hæmorrhage. Fragments of tissue of about one cubic centimetre are separated from the body and arranged in several successive "stories" on copper gridirons, in guaged receivers inverted over mercury. This arrangement, by the multiplication of surfaces effected, favors the intensity of the phenomena of exchange. Strict care is taken that the weight of the substances used, their temperature, and the length of their sojourn, be identical.

In the first experiment thus made with the tissues of a mongrel between a jackal and a dog, it was found that after twenty-four hours the absorption of oxygen was very different according to the tissues, and that each of them had exhaled a quantity of carbonic acid different from that given out by the rest. The degree of these differences is subject to great variations, but the intensity of the phenomena in question affects a certain hierarchy, which has, with the exception of a few slight oscillations, been found always the same. This order presents itself as follows:—muscle, brain, kidneys, spleen, testicles, bones broken up and containing their marrow. The following experiments on dogs give in all respects analogous results. He does not present a table of figures; but contents himself with saying that 100 grammes of muscle absorbed as a maximum about 50 cubic centimetres of oxygen in twenty-four hours, with an oscillation in the temperature of the surrounding air of 10 degrees; and exhaled a corresponding quantity of carbonic acid; whilst under the same conditions the bones, which are at the foot of the scale, gave about 17 for oxygen and 8 for carbonic acid. The heart behaved pretty much like the muscles.

It is interesting to note that the hierarchy relating to the exhalation of carbonic acid does not correspond to that of the absorption of oxygen as concerns at least the same tissue. The fact demonstrated by Spallanzani that the quantity of oxygen absorbed increases in direct proportion to the richness in oxygen of the surrounding medium, was verified by M. Bert. It is worth while, on account of the practical bearing of this experiment, to give a few figures. Muscles from a dog (20 grammes) in equal quantities of gas (160 cubic centimetres) absorbed during twenty-four hours, at a temperature of 13 degrees [centigrade] when the gas was common air, 10·3 cubic centimetres of oxygen; and in pure oxygen 41·4 cubic centimetres. The exhalation of carbonic acid in this same experiment was in inverse proportion. In the air it was measured by 12·4 cubic centimetres, and in oxygen 9·9 cubic centimetres.

The muscles of cold-blooded animals (at a temperature of 10 to 15 degrees) absorb less oxygen than warm-blooded.

When an animal is allowed to die in pure oxygen it leaves unusued a large proportion of oxygen—70 to 80 parts in a hundred; while carbonic acid is produced to the amount of 20 to 30 parts in a hundred. The non-toxic property of carbonic acid being well known, it is presumable that the carbonic acid of the atmosphere opposes the emergence of the carbonic acid of the blood and of the tissues: thence, arrest of absorption of oxygen, in spite of its presence in considerable quantity in the surrounding medium. The experiments of M. Bert have confirmed and completed these assumptions.

A physiological fact of comparative physiology is added. On anatomical considerations, as the reporter tells us, it has been supposed by everybody that the tortoise, like the frog, swallows the air it consumes; that is to say, by closing the nostrils during the contraction of the pharynx. Shut up in an unyielding box, adherent to the superior wall of this cage, pressing closely into the intercostal furrows, and composed of sacs which open directly into the bronchi, how could the lung of a tortoise dilate and contract like the lungs of the mammalia?

Now here is a case for the application of the famous adage, *E pur si muove.* For the tortoise, in spite of what writers have said, respires air and does not swallow it. Twenty years ago Panizza demonstrated this fact. M. Bert has studied the mechanism of this respiration, and has obtained very clear evidence that tortoises have a perfectly defined respiratory rhythm. The respiration is effected by a veritable dilatation of the thorax. The inspiratory muscle is situated in the rear, between the carapace and the sternum. The rhythm of the tortoise's respiration is quite singular. It is composed of a half expiration, of an entire inspiration, and then of another half expiration; these following each other without interval. There is now a period of repose usually quite long. In energetic and rapid inspirations and expirations, the limbs intervene in the mechanism of thoracic movement, but not in the ordinary action of the lungs.

NEW FORM OF CRAYONS OF SULPHATE OF COPPER. *Mr. Editor,*—Every ophthalmic surgeon, and every general practitioner called upon to treat acute and chronic cases of catarrhal and granular conjunctivitis, has experienced the great difficulty of obtaining suitable crystals of sulphate of copper to be shaped into crayons for application to the eyelids. It is necessary that these crayons should be cut from the denser parts of the crystal, free from soft portions and from water of crystallization, otherwise the surface soon becomes so rough as to scratch the conjunctiva, and so porous that it retains some of the morbid secretions, so that it becomes impossible to wipe the surface clean, and to use the crayon, without danger of conveying contagious products, for a succession of patients.

Good crystals may sometimes be had at the laboratories; but when packed for sale they are so broken, in being pounded into barrels, that it is only now and then that pieces can be found fit to be cut into the shape of crayons, or of a convenient size and form to be used as whole crystals. It would seem that it would be easy to recrystallize the sulphate, but there appears to be some practical difficulty in obtaining large and dense crystals, except where the manufacture is carried on upon a large scale. At the City Hospital it has been necessary to make diligent search among large quantities of fragments of sulphate of copper to find a supply of crystals for use in the Ophthalmic Department.

By combining with the sulphate of copper a small amount of alum, Mr. D. Kennedy has succeeded in casting crayons in moulds, which, though not quite equal to the best crayons laboriously formed from crystals, yet combine in a sufficient degree the essential qualities of hardness and a non-porous surface, and which are not affected by atmospheric exposure. They wear so nearly smooth that if carefully wiped they may be continuously used without danger from contagion, and they last a long time. We thus have a safe and convenient substitute for the nitrate of silver (often, perhaps, resorted to because other means are not at hand), which will be highly appreciated by those having to treat chronic cases of granulated lids.

The same chemist has prepared other crayons containing a larger proportion of alum, and some composed wholly of the latter substance. Crayons of alum, which I introduced into ophthalmic practice many years since, have been successfully employed in the treatment of the milder forms of conjunctivitis; though they are by no means a substitute for the copper as applications in the more severe cases.

The crayons referred to may be had of Gleason, 1609 Washington Street, or of Codman and Shurtleff, 13 Tremont Street, and should they be called for will doubtless be kept by all druggists. Though not a new invention, these crayons have not hitherto been obtainable in this vicinity, and their convenience and usefulness induces me briefly to call attention to them.

Henry W. Williams, M.D.,
Ophthalmic Surgeon to the City Hospital, Boston.
15 *Arlington Street, Feb.* 10, 1870.

Record of Mortality in Berlin for November, 1869. (Translated for this Journal by S. G. Webber, M.D.)—Births, 1363 boys, 1283 girls; total, 2646 children, of which 211 boys and 173 girls were illegitimate. 27 times there were twins born.

663 couple were married.

Deaths 1613 (866 males, 747 females). Among these were 182 illegitimate children under 15 years of age.

Under 1 year, 620; between 1 and 5 years, 273; between 5 and 10 years, 41; between 10 and 15 years, 17; between 15 and 20 years, 24; between 20 and 40 years, 243; between 40 and 60 years, 212; between 60 and 80 years, 155; between 80 and 90 years, 22; between 90 and 100 years, 4;—under 15 years, 951; above 15 years, 660;—age unknown, 2.

Born dead, 72 m., 57 f.; lack of vitality after birth, 39 m., 27 f.; old age, 21 m., 29 f.; suicide,[*] 19 m., 6 f.; accident,[†] 14 m., 4 f.; puerperal fever, 17 f.; smallpox, 8 m., 5 f.; scarlatina, 5 m., 6 f.; measles, 10 m., 9 f.; pemphigus (blasenausschlag), 1 m., 3 f.; thrush, 1 m., 1 f.; whooping cough, 11 m., 9 f.; gastro-nervous fever and typhus, 27 m., 25 f.; catarrhal fever, 8 m., 6 f.; rheumatism, 2 m., 3 f.; erysipelas, 3 m., 4 f.; diarrhœa and diarrhœa with vomiting of children, 38 m., 25 f.; inflammation of brain, 42 m., 42 f.; gangrenous croup (diphtheritis) 39 m., 38 f.; membranous croup, 12 m., 11 f.; quinsy, 2 m., 2 f.; inflammation of air-passages, 19 m., 25 f.; inflammation of the diaphragm and the lungs, 47 m., 34 f.; of the abdomen, 6 m., 14 f.; of the urinary organs, 8 m., 2 f.; organic diseases of the brain, 8 m., 8 f.; of the spinal cord, 3 m., 3 f.; of the heart, 5 m., 12 f.; of the lungs, 5 m., 5 f.; of the stomach and intestinal canal, 9 m., 3 f.; of the liver, 8 m., 3 f.; other organic disease of the abdomen, 5 m., 4 f.; dropsy in the chest, 3 m., 2 f.; dropsy in the abdomen, 1 f.; general dropsy, 7 m., 8 f.; gout, 1 f.; diabetes, 1 m.; syphilis, 1 m.; scrofula and rachitis, 2 m., 1 f.; tubercle of the brain, 2 m., 3 f.; laryngeal and pulmonary phthisis, 140 m., 102 f.; cancer of the stomach, 6 m., 2 f.; of liver, 1 m., 3 f.; of breast, 2f.; of womb, 6 f.; of abdomen, 3 f.; part not mentioned, 1 m., 3 f.; tetanus, 14 m., 14 f.; spasm of the glottis, 1 f.; eclampsia of children, 53 m., 41 f.; delirium tremens, 1 m.; cerebral apoplexy, 33 m., 33 f.; pulmonary and cardiac apoplexy, 9 m., 13 f.; paralysis, 1 m., 1 f.; chronic arthritis, 2 m.; strangulated hernia, 1 m.; noma, 1 f.; suppuration of cellular tissue and glands, 2 m., 5 f.; inflammation of umbilicus, 1 f.; fatal termination of surgical operation (hæmorrhage, pyæmia, &c.) 2 m., 3 f.; other surgical diseases, 1 m.; marasmus, 51 m., 31 f.; paralysis of lungs, 16 m., 12 f.; teething, 6 m., 7 f.; decomposition of the blood (blutzersetzung), 1 f.; unknown, 5 m., 2 f.—*Berliner Klinische Wochenschrift*, January 3, 1870.

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[*] Hanging, 10 m., 2 f.; poisoning, 1 m., 3 f.; shooting, 7 m., drowning, 1 m., 1 f.

[†] From carbonic oxide gas, 5 m., 1 f.; alcohol poisoning, 1 m.; burns, 1 boy; run over, 1 m.; other mechanical injuries, 4 m.; found dead, 2 boys.

VICTORY OF NAVAL STAFF OFFICERS.—The House naval committee, in the matter of the quarrel between the line and staff officers of the navy, has declared by a vote of seven to three against the line officers and the Navy Department. The line insisted that the staff should be treated as a civil institution, while the Department was willing to give the staff assimilated rank. The committee has determined that the staff shall have positive rank just as in the army. The section of the bill relating to medical officers is the only one finished, but the principle has been established, and it will be an easy matter to complete the measure. It is declared that the medical corps on the active list shall consist of 10 medical directors with the rank of captain, 15 medical inspectors with the rank of commander, 35 surgeons with the rank of lieutenant commander, and one hundred assistant surgeons with the rank of ensign. Directors, inspectors and surgeons are to have the present pay and emoluments of surgeons. Assistant surgeons of three years' service who pass an examination for promotion are to rank as masters, and after five years' service as lieutenants. The bill further provides that no promotion to the grade of lieutenant-commander on the active list shall be made until the number is reduced below eighty, which shall thereafter constitute the number of said grade. The number of masters and ensigns in the line is fixed at one hundred in each grade, and ensigns are hereafter to be steerage officers unless assigned to duty as watch and division officers. Representative Stevens, of New Hampshire, is the author of this bill and the reform it embodies, and he has pushed it wisely and untiringly. Whether it can be carried through the House and Senate remains to be seen.—*Boston Daily Advertiser*.

BIRTHDAY DINNER OF A DISTINGUISHED FAMILY IN NEW HAMPSHIRE. *Concord, N. H., Feb.* 9.—Prof. Dixi Crosby, of Hanover, well known in his profession, celebrated his 70th birthday at a dinner at the house of his son, Dr. A. H. Crosby, of this city. His brothers, who were present on the occasion, were the Hon. Nathaniel Crosby, of Lowell, Mass., Dr. Josiah Crosby, of Manchester, John Crosby, of Sandwich (the native place of these brothers), Prof. Alpheus Crosby, of Salem, Mass., and Prof. T. R. Crosby, of Hanover.

The first four mentioned are between seventy and eighty years of age, and they are all healthy and vigorous and actively engaged in business. They have two sisters over seventy years of age, both married to physicians.

The father of this family was Dr. Asa Crosby, of Sandwich, one of the earliest physicians in that part of the State, and he was the father of seventeen children. Of his direct descendants more than a dozen are or have been successful practitioners of medicine.

FROM the Sixteenth Annual Report of the State Lunatic Hospital at Taunton, we take this extract:—

"Three deaths occurred during the winter and spring from pneumonia, an unusual fatality. With this exception no acute disease has prevailed, and the health of the hospital generally has been uninterrupted, except by those chronic diseases which have been incident to or closely connected with the disordered mental condition. Six deaths are reported from old age, a remarkable number. These six patients were respectively in their seventy-eighth, eightieth, eighty-first, eighty-second, eighty-third and eighty-seventh years, and all died without any well-marked form of disease, or at least without any well-defined manifestations.

"The one death from injury, with the public investigation by the legislature into its causes, has been the special event in the history of the hospital during the past year. With the result of that investigation, covering as it did not only this case, but the general management of the hospital and of its inmates, we ought not perhaps to feel dissatisfied, inasmuch as although opinions might and did differ as to the precise amounts of injury in this particular case received before and after admission to the hospital, yet the principles of humanity upon which it is managed, and the spirit of kindness inculcated and practised by those having it in charge, were fully vindicated and unanimously commended.

"The exercise of our best judgment in selecting and retaining attendants, the closest watchfulness in our power of their acts and characters, and the strictest enforcement both by precept and example of the laws of kindness and humanity, are all that can be reasonably required in those having supervision of the care of the insane, and the presence of these essentials in the management of this hospital was fully recognized both in the testimony of every witness without exception, and in the conclusions of all the committee.

"The matter of the application of force in managing the insane in hospitals, often seems to be little understood and unreasonably treated among the community, although the very construction of our hospitals, with locked doors and barred windows, recognizes the fact, that dangerous manifestations requiring to be met with counter forces are to be expected, and although force when applied outside the hospitals by people little acquainted with the disease, is usually through unnecessary fear extreme. One design of the modern hospital is to substitute as far as possible moral for physical force. The attendant, under the direction of the superior officers, represents the controlling power, combining both the moral and the physical force, with the instruction to use the latter only when the former has proved insufficient, and on no account to use more than is required for the protection of the individual or of others. That these points are simply matters of judgment depending largely upon the individual character of attendants, upon their intelligence, self-control, courage and tact, is undoubtedly true, and that every position in a hospital can be filled at all times with persons possessing these qualities in the highest degree, is readily conceded to be an impossibility. Trial is the only sure guage of adaptability in so peculiar an occupation as this, and consequently attendants are sometimes engaged who prove unfitted and are afterwards discharged, and then the place is to be filled by the selection of the best person to be found for it. Now the number of people willing to engage in this occupation, in some respects far from attractive, is not large, and the selection is in this way also much limited. Still I can in the main speak with the utmost confidence in favor of the character and conduct of the attendants, both those employed now and at former periods. To one who understands fully the nature of their duties it is often a matter of surprise that we are able to obtain so intelligent and good a class as we do, and one cannot realize fully the peculiarly trying positions in which they are often placed without some wonder that they do not oftener give way to the ordinary failings of erring human nature. To give those engaged in the business of caring for the insane a tolerably fair degree of moral support, is a matter of some importance, inasmuch as just so far as the community fail to do this, just so far they lower the class and the general character of those who will be willing to engage in the occupation. The first duty of course is to protect the insane on account of their dependent condition. The second is to protect those having charge of them by endeavoring to appreciate as fully as possible the anomalous and difficult positions in which they are frequently placed, and not allowing prejudice and highly colored statement and hallucination to outweigh reason and probability and fair evidence.

From the report of a case of Urgent Dyspnœa and Engorgement of Heart with Blood—Venesection—Immediate Recovery, by Gopaul Chunder Roy, L.M.S., Teacher in the Medical School, Nagpore, we make the following extract:—

L., aged about 35 years, a police constable, of pretty strong constitution, was brought into the Nagpore City Hospital with extreme dyspnœa and impending "suffocation." Has been ill with bronchitis for the last two months. About four days before admission fever supervened. It was of an intermittent nature, and used to come at the middle of the day with shivering. This day it came as usual, and the cold stage lasted for two hours, but after its cessation he was suddenly taken ill with dyspnœa, which, within a short period, so much increased that, with an anxious apprehension of an imminent death, his friends brought him for relief to the Hospital. The condition in which I then observed him was the following:—The patient was seated on a bench, breathing deep, hurried, and with difficulty; countenance anxious and livid; skin warm; eyes protruding; a rattling noise with the respiration; a feeling of approaching dissolution, and craving to be saved; the veins of the neck prominent, and with each inspiration the external jugular was found to swell out as big as a finger; heart's sound loud and tumultuous, and its impulse strong. Auscultation over the lungs showed that air was entering freely on both sides; percussion sound normal; had never any such complaint before.

Whilst each moment aggravated the dyspnœa and increased the risk of suffocation, I thought to lose no time in bleeding him. The median cephalic vein of the right arm was opened, and about fourteen ounces of blood were withdrawn in a sitting posture, at interrupted intervals. The heart's action in the meantime was strengthened by diffusible stimulants, so that even no approach to fainting was induced. The effect of venesection was charming. As the blood was flowing the breathing became easier, the veins less prominent, and the heart's action more quiet. Within a quarter of an hour the symptoms disappeared like the extinction of a flame.—*Medical Times and Gazette.*

On a Protective Agent against Moths and other Insects. By Geo. F. H. Markoe.—*Query* 16*th*.—What is the best substitute for camphor for the protection of woolens from moths and other insect, that will be cheaper and more effective?

In reply to this query the writer would suggest the use of naphthaline as a substitute for camphor. It is an effective protective agent against the ravages of moths and other insects among woolens and in natural history collections.

When purified, naphthaline is obtained in beautiful crystalline masses, possessing a strong peculiar odor, recalling the smell of coal-tar creosote. In its crude state the crystals are of a brown color, and the odor much more intense than when purified.

Naphthaline has been put to a thorough test by Prof. Asa Gray in Harvard College Herbarium, and in the cabinets of the Boston Society of Natural History. The results obtained in these trials were highly satisfactory and conclusively proving the value of naphthaline as a protective against the ravages of the destructive insects that infest woolens and the cabinets of museums.

It is very cheap, being a waste product in the distillation of coal-tar for which no practical use has been found except for fuel and for the manufacture of lampblack. The only objection the writer can find to its use is its strong odor, which to many people is very disagreeable; this fact will alone prevent naphthaline from becoming a popular substitute for camphor, at least so far as its application to the protection of clothing is concerned; but for use in natural history collections it leaves little to be desired.—*Proc. Amer. Phar. Association*, 1869.

Nitric Acid formed during a Thunderstorm.—Mr. Pepper says that when a spark from the great induction coil at the Polytechnic is passed through common air, the result is a red coloration when blown against damp litmus paper. In order to ascertain whether the acid product was nitric acid, the "flaming" spark (nine or ten inches in length) was passed through a bottle containing distilled water, from which another tube passed to the air-pump. On drawing the air slowly over the spark, and passing the former into the bottle, nitric acid was obtained in large quantities, so much so that it could be detected by the smell and taste as well as by the ordinary tests. The popular notion that nitric acid is always produced during a thunderstorm would, therefore, appear to be correct. Also, it is evident that the purifying influence of a thunderstorm is a popular idea founded on facts.—*Medical Press and Circular.*

Admiral Porter, as was to be expected, is opposed to the bill in behalf of staff officers of the Navy, which has been adopted by the House Naval Committee, and has written a letter on the subject. The Committee, however, finds that the positive rank of staff officers has not ruined the army, and seems not to fear it for the navy.

The number of deaths registered in the entire of the Dublin Registration District during the week ending Jan. 15th, represents an annual ratio of 25 in every 1000 of the population by the census of 1861.

DEATHS FROM CHLOROFORM.

At the West Kent General Hospital, a woman, æt. 39, from whose gums and lower jaw malignant fungous growths were being removed by the galvanic cautery, "after being very moderately under the influence of the anæsthetic, administered by Dr. Skinner's flannel mask, for about thirteen minutes, on the third introduction of the heated wire she instantaneously expired."—*British Medical Journal*, Dec. 11, 1869.

Another death from chloroform is reported in the case of a man aged 68, in York County Hospital. Scarcely had a drachm been inhaled when the patient became suddenly rigid, his pulse stopped, and he died.—*Dublin Medical Press and Circular.*

Medical Miscellany.

Levee of the Medical Faculty of Harvard University.—The Faculty of the Medical College gave a levee last Tuesday evening, at the Revere House, to the students. There were present also about twenty-five specially invited guests. Among the latter were President Eliot and Prof. Lovering, of Harvard University; Dr. McLaren, Medical Director of this District; Dr. Henderson, Chief Medical Officer of the Navy Yard, Charlestown; Dr. Knight, Surgeon of the Receiving Ship of War Ohio; Dr. Bowen, of the Navy; Mayor Shurtleff, M.D. An hour or two was spent in the interchange of courtesies, at the close of which the company were invited to the adjoining rooms, where refreshments were served. The occasion of the levee was the finishing of the winter term of lectures. The class numbers about three hundred. The Medical Department of the College was never more prosperous than now. The students represent nearly every portion of the Union, and also the British Provinces.

Amputation During Anæsthesia with Chloral.—Dr. Noir (of Brioude, France) has published, in the *Gazette des Hôpitaux* of December 23d, 1869, the case of a man, aged 64, suffering acutely from osteo-sarcoma of the leg. The patient was very anxious to have the limb taken off; and, as a trial, he took about sixty grains of chloral, dissolved in 2 oz. simple syrup, at 8, A.M. Up to nine o'clock, he frequently made efforts at vomiting, and had defective vision; after this came violent excitement, which lasted two hours; he then fell asleep, and soon was so insensible that he could be moved about without waking. This sleep lasted about an hour and a half, and the patient, on coming to his senses, said he felt very well, and asked for food. Pain had of late deprived him of sleep, and he was overjoyed to have had some rest.

Two days after this, the man took seventy-five grains of chloral at eight in the morning, and was uncomfortable for two hours, when he fell into a deep slumber, and underwent amputation of the leg without moving or uttering a sound. After being placed in bed, the patient sank into an alarming coma for one hour; after which, on waking, he was seized with violent delirium and severe vomiting. These fearful symptoms lasted about seven hours, when the poor man passed into a state of complete prostration, and recovered his senses; but did not recollect anything of what had passed, and could hardly speak or move. He took some beef-tea, had a sleepless but quiet night, and the next day all the effects of the chloral had passed off.

Dr. Noir remarks that, in this case, delirium, prostration and coma were so alarming that it would be imprudent to use chloral as an anæsthetic in operations if further experience prove that these dangerous symptoms regularly present themselves. There can, however, be no doubt, he adds, that insensibility was complete during the operation.—*London Lancet.*

Mr. Marsh has employed forcible straightening of the bones in a case of rickets. The patient was put under chloroform, and the tibiæ, which were curved forwards, were forcibly straightened. The practice seems novel and promising. —*Dublin Medical Press and Circular.*

Members of the profession interested in Diseases of the Eye are invited to visit the Ophthalmic Clinique of the Boston City Hospital, at their convenience, on Mondays, Wednesdays and Fridays, from 9 to 11 o'clock.

Henry W. Williams, M.D., *Oph. Surgeon.*

Addendum.—To the foot-note on page 102 of the last number of this Journal the following sentence should have been added:—And on the *Dangers of Blistering* in the October number of the same periodical (*The Practitioner*).

To Correspondents.—Communications accepted:—Chloral in Obstetric Practice—Fatal Case of Poisoning by Mercurial Ointment.

Books Received.—The Cell Doctrine: Its History and Present State. For the use of Students in Medicine and Dentistry. Also a Copious Bibliography of the Subject. By James Tyson, M.D., Philadelphia. With a Colored Plate and other Illustrations. Pp. 150. Published by Lindsay & Blakiston; for sale in Boston by James Campbell.

Died,—At Woburn, Feb. 12th, Dr. George Osgood Dalton, aged 30 years.—At Newport, R. I., Feb. 3d, Dr. Charles Cotton, aged 81 years.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending Feb. 5, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases Consumption.	Pneumonia.	Scarlet Fever.
Boston	115	10	4	7
Charlestown	13	4	0	2
Worcester . .	15	4	3	1
Lowell	24	4	0	2
Milford . . .	2	0	0	0
Chelsea . . .	2	1	0	0
Cambridge .	24	4	0	0
Salem	6	1	0	1
Springfield .	8	2	1	0
Lynn	7	0	1	0
Pittsfield . .	4	0	1	0
Gloucester .	11	4	1	0
Fitchburg . .	2	2	0	0
Newburyport	6	2	1	0
Fall River .	10	1	0	0
Haverhill . .	3	0	0	0
	252	39	12	13

Boston reports four deaths from smallpox. Lowell reports five deaths from measles. From all the above places there are reported eleven deaths from croup and diphtheria, seven from typhoid fever, and two from whooping cough.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending February 12, 115. Males, 66—Females, 49.—Abscess, 1—accident, 1—anæmia, 1—apoplexy, 5—asthma, 1—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 4—inflammation of the brain, 2—bronchitis, 4—burned, 1—cholera morbus, 1—consumption, 10—convulsions, 4—croup, 3—debility, 5—diarrhœa, 1—diphtheria, 1—dropsy of the brain, 2—drowned, 1—erysipelas, 1—scarlet fever, 7—typhoid fever, 1—gastritis, 1—hæmorrhage, 1—disease of the heart, 5—homicide, 1—insanity, 1—jaundice, 2—disease of the kidneys, 2—congestion of the lungs, 2—inflammation of the lungs, 4—marasmus, 4—old age, 5—paralysis, 2—peritonitis, 2—pleurisy, 2—puerperal disease, 1—rheumatism, 3—septæmia, 1—smallpox, 4—suicide, 1—tumor, 2—unknown, 9—whooping cough, 1.

Under 5 years of age, 38—between 5 and 20 years, 11—between 20 and 40 years, 23—between 40 and 60 years, 24—above 60 years, 19. Born in the United States, 77—Ireland, 27—other places, 11.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

CASES OF DIPHTHERIA.

Read before the Boston Society for Medical Observation, Oct. 18th, 1869, by Francis Minot.

The following observations will not be found to contain any new facts or suggestions concerning diphtheria. They are offered to the Society's consideration merely as good illustrations of some of the peculiar phenomena of this remarkable disease, and as showing the effect (so far as two cases might show it) of energetic local treatment, upon the spread of the membranous exudation in the throat. While authorities differ as to the value of this mode of treatment, I can testify that even when thoroughly carried out, it causes very little pain or even discomfort to the patient. I am accustomed to employ the ordinary muriatic acid of the shops, applying it on a swab made by twisting a little bit of cotton around the end of a stick as big as a common probe. The cotton should first be dampened with water, then moistened in the acid, and applied to the false membrane, and slightly beyond its margin to the adjacent parts. If care be taken merely to *moisten* the cotton in the acid, the latter will not run beyond the limits designed by the operator, nor will the patient feel much, if any, pain. The authorities generally recommend but one thorough cauterization, but I have found two applications of the acid daily, for several days, apparently beneficial.

The external application of ice generally affords great comfort to the patient, and is apparently of much curative effect. I have used it without the least inconvenience or annoyance in the case of an infant under a year old. A long India-rubber bag is filled with small bits of ice, and secured around the neck, like a cravat. I wish to say, however, that while I believe these measures are useful as well as harmless in the treatment of diphtheria, I am aware that the two cases, related in this paper, in which they were employed, were comparatively mild, and would probably have recovered had they not been used.

The second case offers a point of interest in respect to the duration of the period of incubation of diphtheria. In this instance it could not have been longer than four days.

Case I.—William S., 16 years old, a strong, healthy lad, was in the habit of going from Boston to Dorchester daily to school. On Wednesday, March 20th, 1867, he felt quite chilly, but not otherwise unwell. The next day he went out of town, as usual, but felt very poorly, complaining of chills and sore throat. He returned to town early, and went to bed. When seen early in the evening, there was much redness of the soft palate, pillars and tonsils. On the inner surface of each tonsil was a white patch, three-fourths of an inch long, and one-half an inch broad. The tonsils were a little enlarged. There was some swelling about the angle of the jaw, on the left side. Tongue coated; thirst; no appetite; pulse quite irregular and intermittent, below 60; patient restless.

Friday, March 22d.—White deposit extending over the tonsils. Other symptoms as before.

Saturday, 23d.—Lymph has spread over the pillars and uvula, and a few small patches are seen on the left palate.

Sunday, 24th.—Restless night. Pulse 84. Deposit has invaded the soft palate, reaching a few lines from its edge, and to a greater extent in the centre, above the uvula. The uvula is covered with a dirty-brown exudation, it is much enlarged in size, and lengthened. The boy is very uncomfortable and restless. Some trouble in breathing. Expectoration of tough, somewhat bloody, mucus.

Monday 25th.—On blowing the nose, blood is expelled. No increase of deposit in the throat. External swelling somewhat diminished. Breath fetid. General condition about the same. Takes milk freely. Is comforted by the steam which he inhales. In the evening the pulse was at 108.

Tuesday, 26th.—Slept a good deal, and took sufficient nourishment. Early in morning had copious nosebleed, to which he is subject. Pulse 94. No extension of deposit on soft palate, but some seen in back of pharynx. Uvula rather less swollen, covered with a dirty-looking, sloughy crust. Expectoration bloody. At 10½ he had a choking, from detachment of the membrane, which was alarming, but it passed off, leaving him much prostrated. He has a dusky or livid look, and is rather drowsy, perhaps from an opiate. Takes nourishment and stimulants regularly. No delirium. Urine sufficient.

Wednesday, 27th.—Very restless all night, at times greatly prostrated. Mind clear. Complains only of sleepiness. Breathing easy, about 28, at times stertorous, sometimes with a flapping sound. Pulse 144. Face dusky. Urine highly albuminous. At 10, A.M., pulse barely perceptible. Patient very restless, turning his pillow frequently. Mind clear. Died at 11.45, A.M., about a week from the first symptoms.

No cause could be assigned for the disease, no other case being known to the patient or his friends; but the boy was in the habit of riding to Dorchester in the horsecars, daily. The treatment consisted in astringent gargles, with stimulants, which latter were continued throughout. Inhalation of steam was employed with much comfort. Plenty of nourishment was taken. No topical applications were made.

Case II.—E. S., sister of the last-mentioned patient, 18 years old, was with her brother constantly for the first two days of his illness, sitting by his bedside, and often kissing him. On Sunday, March 24th, she was well, and went to church. In the evening she was chilly. Had a restless night, and awoke on the 25th with sore throat. There was a white streaky deposit on the left tonsil. Chills; loss of appetite.

Tuesday, 26th.—Deposit extending on tonsil. It is greyish and sloughy-looking. No redness in throat; tongue clean. No external swelling. Feels better.

Wednesday, 27th.—Much agitation on account of her brother's death. Pain in throat. In the evening a white patch appeared on the right tonsil. Pulse 96. (Ice bag to throat. Local application of strong muriatic acid.)

Thursday, 28th.—Much comforted by the ice. Pulse in morning, 106; evening, 96. No increase of deposit. Headache. Acid applied thrice daily.

From this time E. S. slowly improved. On the 31st scarcely any deposit could be seen. The convalescence was tedious, the appetite being very poor. She was able to sit up, April 8th, but was some weeks in recovering her strength. There was no consecutive paralysis. The acid was applied to the throat three times daily, on a small swab. The ice was continued long after all local manifestations had ceased, the patient being very reluctant to leave it off. A plentiful allowance of champagne, beef tea, milk, &c., was enjoined, but it was difficult to induce her to take much nourishment.

The period of incubation in this case was four days, if we consider, as seems most reasonable, that the first patient caught the disease while away from the house, for no other person in the family had any sickness, nor was there any other case of diphtheria in the neighborhood.

Case III.—*Albuminuria and Dropsy, following Diphtheria.*—Catherine F., 35 years old, single, consulted me, June 5th, 1867. She lived in a neighboring town, when she had diphtheria, under the care of another physician, in the months of March and April previous. She had, while convalescent, pain in the left temple, otorrhœa and deafness. She also had swelling of the upper and inner parts of the thighs, and about the knees, making it difficult for her to cross one knee over the other. The swelling then extended to the feet, and afterwards was noticed in the face, especially in the eyelids. June 5th, noticed that her hands were swelled. Her appetite was good; pulse normal; urine frequent, but not scanty. Legs and thighs very œdematous, making it difficult for her to walk; hands somewhat swelled. She is drowsy. Catamenia regular. Urine highly albuminous, containing casts, mostly of small diameter, some of them containing pus corpuscles. She was ordered ten grains of tannin, thrice daily, milk diet, and a hot bath every night. Under this treatment the œdema diminished very much, and the urine was increased somewhat in quantity.

A specimen of urine, examined June 12th, was found to be of sp. gr. 1010, feebly acid; albumen diminished; one or two granular casts seen. Patient writes, "my feet are nicely." June 19th, œdema almost wholly gone. Urine contains considerable albumen, a number of granular casts of various sizes; many nucleated cells of small size, some fibrous-looking bodies, no blood corpuscles, and a great abundance of vaginal epithelium. (Omit tannin. Take fifteen drops of tincture of chloride of iron three times daily.) July 10th, nearly three quarts of urine were passed in the night, probably in consequence of having drunk some ale, and more tea than usual. The urine contains perhaps less albumen than before; sp. gr. 1010. Some œdema of ankles, and also of the face in the mornings.

The symptoms continued the same during several weeks. Sept. 2d, there was some improvement. The appetite was better, bowels free. The urine was still very abundant, frequently amounting to two quarts during the night. On examination, its condition was unchanged. It contained no sugar. Sp. gr. 1004. The last time I saw Catherine F. was Sept. 18th, 1867, when there was no change in the symptoms; but Dec. 5th she wrote me, "I believe I am quite whole again, excepting a twitching sensation in my head." I do not know what has since become of her.*

Case IV.—*Diphtheria, followed by Paralysis (Asthenia) and Death.*—Mrs. A., widow, 65 years old, had an attack of diphtheria in Lynn, in July, 1867, when she was treated by Dr. Edward Newhall. In September she began to have feebleness of the limbs, and at the same time an attack of inflammation of the cornea of the right eye, which had occurred twice before, at intervals of several years. I saw her Sept. 29th, 1867, with Dr. Williams, who was treating the eye. She was very feeble. Pulse 60, weak. Appetite poor and capricious; sleep irregular, occasionally good, oftener she was wakeful. No distinct paralysis of limbs, but great weakness, and difficulty in walking and standing. She walks out a little, supported by an attendant, and drives daily. Spirits depressed, memory impaired, and mind sometimes a little wandering; speech a little slow; no difficulty in swallowing. Bowels regular. Urine contains no albumen. She was taking tonics with stimulants, and bromide of potassium. (Sulphate of iron, sulphate of quinine, extract of nux vomica, iodide of potassium, elixir of opium; good diet.)

The patient continued to grow worse in all respects. Oct 8th, she was very delirious. She took that night at bed time two ounces of whiskey, with 30 drops of McMunn's elixir of opium, and slept soundly till 8, A.M. the next morning. During the day following she was quite insane, with all sorts of delusions. She refused nourishment and medicine, though I succeeded in making her take 40 grains of bromide of potassium at 10, A.M., and at 1, P.M. she took a few spoonfuls of broth. During the afternoon she was completely maniacal, very suspicious and abusive. At 6, P.M., in consultation with Drs. Newhall and Williams, I gave her a subcutaneous injection of about three-fourths of a grain of morphia. In about fifteen minutes the patient fell asleep, and was found to be dead at 4 o'clock on the following morning. Circumstances make it probable that she died as early as 10½ o'clock the previous evening, but although she was never left alone, she expired so quietly that no one was aware of her death.

The depressing effects of the poison of diphtheria are well illustrated in this case. Beginning several weeks after apparent recovery from the acute attack, the asthenia steadily increased, complicated with mania, and proved fatal in a month.

Case V.—*Diphtheria, recovery; Albuminuria and Paralysis of Palate and lower Extremities.*—J. B., 13 years old, after some supposed exposure to cold, complained of sore throat, Saturday, July 3, 1869. She was down stairs, dressed. Pulse, 108. Fauces red; tonsils enlarged, the left covered with numerous white dots, while other dots could be seen in the back of the pharynx. There was a thin whitish exudation on the uvula. On the right margin of the soft palate was a thick, chalk-white pellicle, half an inch long by a third of an inch broad. Some swelling behind angle of right jaw.

During the next few days the exudation extended on the palate and uvula. The swelling about the angle of the jaw increased very much. The breath became offensive, and the voice thick. The pulse varied between 108 and 120. The appetite was poor, and the patient was restless. July 6th, the membrane began to exfoliate, large pieces coming away, and no new formation took place. By the 12th the deposit was almost gone. On the 7th the external swelling began to diminish. The next day the voice became whispering, and the patient could not speak loud till after the 11th, when she was well enough to go to Rye Beach. During all this time the patient was up and dressed. She took brandy, beef tea, cocoa, milk, ice cream, and other nourishment, freely. The medical treatment consisted in the application of strong hydrochloric acid to all the parts which were covered with the exudation, and the sound parts in their immediate neighborhood, ice externally to the throat, in a long India-rubber bag, and quinine internally. When she left town, the tincture of chloride of iron was substituted for the quinine.

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* Catherine F. again called upon me Nov. 1st, 1869, when I made the following notes.—"Through the last winter she was in good health, though the quantity of urine was large. In the Spring, after exposure to wet, cold and fatigue, the dropsy returned, and has continued, in varying degree, ever since. The catamenia ceased in June last, and have not returned. About ten days ago her sight suddenly failed, she could not see to read, and now everything looks as if 'seen through a shower of rain.' The legs are swollen and very hard, the abdomen is enlarged, face much swollen, conjunctivæ infiltrated with serum. Bowels free. Some pain in lower part of back. She rises two or three times in the night to urinate. The urine is loaded with albumen, and contains numerous casts, chiefly granular, and a few transparent." She consulted Dr. Williams on account of the failure of sight, and he readily detected the characteristic white spots on the retina. Catherine F. grew worse, and the last time I heard from her she was evidently very near her end.

The urine, examined July 5th, contained no albumen. On the 13th it contained a trace of albumen, and crystals of triple phosphate. The albumen increased in quantity till towards the middle of August, when it disappeared.

At about the middle of July the voice (previously whispering) became nasal. This peculiarity increased, indicating some paralysis of the palate, and the voice was not fully restored until Sept. 1st. About the first of August the patient began to feel much weariness in the legs, so that she could only walk a short distance, and she would stumble and fall unaccountably. These symptoms continued till she returned to town, Sept. 15th. Even now the gait is a little awkward, although the general health is excellent.

I omitted to mention that this patient had epistaxis freely, July 5th, and slightly, July 12th.

CHLORAL IN OBSTETRICAL PRACTICE.

By S. G. Webber, M.D., Boston.

The following abstract adds to the clinical experience with chloral which is so rapidly accumulating, and which will soon enable physicians to give that drug its proper place in the materia medica. The cases recorded by the author[*] only partially support the twenty-third conclusion of Dr. Bricheteau, as given on page 391 of the last volume of this Journal.

E. K., 26 years old, maidservant, pregnant with her first child, came to the lying-in hospital on Oct. 6. She was of healthy family, and had enjoyed good health, had menstruated from her eighteenth year irregularly, but without pain. Her catamenia ceased in March.

She was received and employed about the hospital until Nov. 14, when her face was noticed to be bloated. She stated that on the 10th there had been a remarkable increase in the size of her abdomen, her digestion had been sluggish and the secretion of urine diminished. There was anasarca of the labia and of the legs; the skin was dry; temperature not increased; a slight, dry cough; urine contained albumen and casts. A warm bed, infus. rad. ipecac. and liq. ammon. acet. were prescribed.

Nov. 16.—At 7 o'clock, P.M., fell asleep quietly. At 8, P. M., the attendant noticed spasmodic distortion of the head to the left, with entire loss of consciousness with purple countenance; she foamed at the mouth, and soon the arms and legs were attacked with convulsions. This attack lasted about three minutes, and she then lay in a deep sopor, with snoring respiration, until after fourteen minutes the second attack occurred with the same phenomena. This attack was cut short by chloroform inhalation. She lay narcotized until 9.45, P.M., when she awoke rational and answered questions intelligently, but without any recollection of the attack. A third attack occurred at five minutes before 10, and a fourth at ten minutes after 11 o'clock. Both were cut short by chloroform inhalation. Between both these attacks and after the last the patient lay unconscious, snoring and rattling in the throat.

Nov. 17.—At midnight, a clyster composed of half the following mixture was given :—Half a cup of starch, with two grammes of chloral hydrate dissolved in thirty grammes of decoction of althæa; and at 1 o'clock the other half was given. Both were retained. Towards 2 o'clock the patient fell into a deep sleep, which continued almost without interruption until afternoon. At 8 o'clock, A.M., the respiration was still snoring and rattling. After awaking she lay quiet, without coming entirely to herself, about two hours, and then went to sleep again, breathing freely.

Nov. 18.—Morning. Slept almost continuously; only awaked by repeated vomiting. Afternoon awoke, took half a teller of broth, and lay quiet, with almost perfect consciousness. The skin was dry; temperature not increased. No stool; no passage of urine. In the evening, pulse 96; temp. 37·9. Tartar emetic (0·18) 180·0, every two hours a tablespoonful.

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[*] Aus der geburtshilflichen Universitäts-Klinik zu Berlin, unter Leitung des Geh. Medicinal-Raths Martin. Anwendung des Chloralhydrats per anum.—[Berliner Klinische Wochensch., Jan. 3, 1870, p. 1.]

Nov. 19.—Pulse 100; temp. 37·8. After the first spoonful of the emetic solution, she vomited and had one thin stool; then slept well, and, after awaking, took her breakfast with appetite. Urine contained albumen and many casts.

The tartar emetic was continued till Nov. 21; on Nov. 24 acetate of potassa was given. The albumen gradually diminished, and on Dec. 2 there was none; the urine had a specific gravity of 1011, and, Dec. 4, the acetate of potassa was omitted.

On Dec 23 she was confined, without any unfavorable symptoms, and gave birth to a fœtus, which had long been dead. There were no further signs of eclampsia.

"The same quiet and sleep-producing effect has been observed in many other cases, in which the chloral hydrat was given per anum in doses of two grammes dissolved in decoction of althæa, with half a cup of warm starch, especially in indisposed pregnant women who need sleep and in persons who have had operations performed. Local irritation never appeared, although the dose was repeated after an hour, when the first clyster was returned.

"As the hypnotic effect of chloral hydrate gave some promise of its being useful in case of spasm of the uterus during parturition, it was employed in a case of rigid os. First, three doses, each containing seven decigrammes Dover's powder, were given; then the next morning four grammes chloral was administered by the mouth, and the warm vaginal douche employed. At 11 o'clock, P. M., the os was no wider, and 0·06 gramme ext. opii and two subcutaneous injections of morphia 0·01 were employed. Deep sleep followed, and, on awaking, the os was found dilated, and the child was born with the help of the forceps.

"Chloral hydrate in this case of obstinate trismus uteri in partu did not produce a resolution of the spasm."

Pneumonia Prevalent among Horses.—During the past three or four weeks a large number of horses have suffered attacks of this disease in San Francisco, which in many instances proved fatal. Among many teamsters, who have lost pretty heavily by the epidemic, an idea prevails that the disease spread from mustangs, which arrived down from the interior. We notice, however, that it has confined itself in a great measure to the horses that were exposed to the wet and cold—street-car horses, &c., which, however, would likely be the case, regardless of the cause.—*Cal. Med. Gazette.*

Selected Papers.

[We reprint the following reply of Sir James Y. Simpson to Dr. Bigelow, from the *London Medical Times and Gazette* of January 22d, 1870. On so important a subject of discussion between two continents as the discovery of anæsthetic inhalation, we presume that the allegations of Professor Simpson will not go unanswered.—Ed.]

HISTORICAL LETTER ON THE INTRODUCTION OF ANÆSTHETICS IN DENTISTRY AND SURGERY IN AMERICA, AND ON THEIR FIRST EMPLOYMENT IN MIDWIFERY IN GREAT BRITAIN.

By Sir James Y. Simpson, Bart, M.D., D.C.L., Professor of Medicine and Midwifery in the University of Edinburgh.

In the last number of the *Medical Times and Gazette* there is copied the chief portion of a letter published at Boston by Dr. Bigelow senior, and referring to the history of anæsthetics in America and in this country. Early in this year I forwarded the following communication to Dr. Bigelow in reply:—

"Edinburgh, Jan. 3, 1870.

"*Dear Sir*,—There has been sent to me from America a Chicago newspaper, containing a letter of yours which is alleged to have been published in a late number of the Boston Medical and Surgical Journal. In this letter you speak of the bestowal upon me, some months ago, by my fellow-townsmen, of the rank of an honorary burgess of Edinburgh; and you comment, in terms of bitterness, upon the subject, and upon what I said—or rather upon what I did not say—on that occasion. I feel assured that if you or any one else had felt as nervous and timid as I did on rising to address the public meeting which witnessed the presentation, you would not be astonished at anything I did allude to, or did not allude to; or that I failed in adverting to numerous matters to which I might and ought to have adverted.

"The *gravamen* of your charge is this:—In his extempore address to me on the occasion in question, the Lord Provost thought fit to allude to some of my Professional investigations, and specially to those bearing on Anæsthetics, Acupressure, and Hospitalism. He spoke of the application of *chloroform* to the assuagement of human suffering as among the 'greatest medical discoveries in modern times.' In replying on the spur of the moment to these among other remarks, I stated simply in a sentence the amount to which chloroform was now used for anæsthetic purposes, by adverting to the great extent to which it was manufactured by one single firm at the present day. I might, if there had been time, have added evidence of the extent to which it has superseded all previous anæsthetics, by stating the amount of its manufacture by other firms here and elsewhere. But I had many other subjects to advert to besides chloroform, and only a few short minutes within which I was expected to include them all. According, however, to your views, I am very deeply blameable for not taking up a subject which the Lord Provost did not allude to—viz., the history of anæsthesia. You hold that I should have entered, to a greater or less extent, into some historical notice of anæsthetic agents. The history of them has always taken me a full hour in my University lectures; and in these lectures I have year after year paid heartily every due compliment to the most important part borne in the consummation of the practical application of anæsthetics by America, particularly by the cities of Hartford and Boston, and specially by the energy and genius of Dr. Morton. Surely, however, it would have been sadly out of place, on such an occasion, and before such an audience, to have shown that, before I discovered the application of chloroform to anæsthetic purposes, numerous other agents had been previously suggested and used for the same object—as sulphuric ether by Drs. Jackson, Morton, and Marcy; as carbonic acid by Dr. Hickman, in imitation of the experiments performed for ages on the poor dogs at the Grotto del Cane; and as nitrous oxide (an agent extensively employed as a dentist's anæsthetic at the present hour), and first proposed for 'destroying physical pains' during 'Surgical operations' by Sir Humphrey Davy. Or should I, in your opinion, have even gone still further back in therapeutic history, and described what, doubtless, as a former lecturer on Materia Medica, you are well acquainted with—namely, the other soporific vapors and measures employed by different olden Surgeons in Greek, Roman, and Mediæval times, with the view of rendering their operations painless to the patient? In that way I could have easily shown that the idea of making a patient anæsthetic before subjecting his body to the knife or cautery was a kind of knowledge familiar even to non-professional writers of mediæval and of later times, and that some theological writers—like Origen, for example, in the third century[*]—allude to the artificial production of anæsthesia in Surgery as a well-known practice; while in reference to Scotland I might have cited Abbot Bower, who lived and wrote about the year 1400, within ten miles of Edinburgh, as telling us by what means the anæsthetic surgery was accustomed to be effected in those days, and what they gave to patients—'secandi, ut possent sine dolore secari;' or I might have adduced the monk Joceline as alluding, with circumstantial details, to an alleged instance of it in the hagiology of Scotland, as early as the sixth century. All this, and much more, might have been mentioned; but all this would have been, in my opinion—though not apparently in your opinion—totally misplaced and grievously out of order; just as any historical disquisition on the previous employment of the ligature, torsion, &c., in hæmorrhage, would have been when I briefly alluded to acupressure.

"In the way of a climax, you terminate one of the paragraphs in your letter with the statement that I was not the 'first man' to inhale a vapor to such an extent as to destroy sensibility. Most certainly I was not; and certainly I never was foolish enough to claim to be so. In the course of my investigations I have, however, experimented upon myself with various vapors, the innocuous or the poisonous effects of which upon the body were previously altogether unknown and unascertained; and I have sometimes suffered in consequence. As a Professor of Therapeutics, you must surely be well aware that the first experiment of breathing a vapor to such an extent as to destroy sensibility was made neither in America nor in our own days. Without adverting to the acknowledged fact that it was accomplished with the vapors driven off from hypnotic vegetable extracts by the older surgeons, from Hugo de Lucca and Theodoric downwards, let me remind you that Sir Humphrey Davy boldly—and notwithstanding he had witnessed occasional deaths in animals from it—made the experiment to which you advert many times upon himself in the last year of the last century with nitrous oxide, and further found that headache and other pains disappeared under its influence.

"About forty years ago, Faraday in this

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[*] In the proceedings of one of the councils of the English Church held at Exeter in the year 1287, the statement of Origen is cited—"Origines et dicit—'Quando volunt medici incidere aliquos, vel urere, dant eis bibere aliquem potum, qui facit eos profunde dormire, ita quod amentes fiant, et sic non sentiant.'" (See Wilkins's *Concilia Magnæ Brittanniæ et Hiberniæ*, vol. ii. p. 162.)

country, and Godman in America, showed, as the result of their observation and experience, that the effects of the inhalation of sulphuric ether were quite similar on the nervous system to those produced by the inhalation of the vapor of nitrous oxide gas—a truth subsequently proved by many pupils in many chemical and other schools in your country, as well as in mine,* by their inhalation of ether. Your remarks, as far as I understand them, imply that it is your belief that Dr. Morton was the 'first man' of 'sufficient courage' to breathe 'a vapor' so as to produce a state of anæsthesia. But you must know as well as I do, from the official documents laid before the Senate of the United States, that this is doubtful even as regards the course of matters in America; for it appears in these documents (1st) that Dr. Jackson avers that he breathed for this object sulphuric ether earlier than Dr. Morton; (2dly) that before Dr. Morton made the ultimate experiment upon himself in 1846, he made it first upon others, and particularly upon his pupil Mr. Spears; and (3dly) that two years previously (or in 1844), Dr. Marcy, of Hartford, had successfully excised a tumor from a man who had been rendered anæsthetic for the purpose by the vapor of sulphuric ether; whilst at that same early date, in the same city, Dr. Horace Wells had extracted teeth from a dozen or more patients rendered insensible by inhaling nitrous oxide gas† according to Davy's suggestion.

"There has lately been raised, I am told, in Boston, a monument in commemoration of the employment of anæsthesia in surgery in that city in 1846. But have the erectors of this monument cut upon it the names of either of your fellow-citizens, Dr. Morton or Dr. Jackson, as the first investigators, or the names of Warren and Hayward, as the first Boston hospital surgeons who operated upon patients under the influence of sulphuric ether? Or have they generously inscribed upon its sides any allusions to the fact that two years previously anæsthetics had been inhaled successfully in dentistry and surgery in the neighboring city of Hartford? I have been assured that there does not yet appear upon the monument the name of a single American chemist, dentist or surgeon. Why is it so? You have the monument. Have you not had the man or men?

"You commence the concluding paragraph of your letter by averring that anæsthetic inhalation 'began' (to use your own words) 'in this country [America], and was first used in the extraction of teeth, and afterwards in capital operations in the Massachusetts General Hospital and in obstetrical practice.' Your words so far affirm that anæsthetic inhalations, besides being first employed in America in dentistry and surgery, were in your country also 'first used' in 'obstetrical practice.' You must excuse my saying that this last assertion is unaccountably incorrect. The use of anæsthetic inhalations in obstetrical practice was begun and extensively followed out in Edinburgh, weeks or even months, before it was tried in Boston, or in America. The first case of midwifery in which sulphuric ether was adopted as an anæsthetic occurred here under my care on January 19, 1847, and was soon afterwards reported in the journals of the day. On March 1, 1847, was published by me in the *Edinburgh Medical Journal*, an essay on the subject, containing a series of obstetrical cases, and a longish discussion of the question of the applicability of anæsthetics to midwifery. It was not, however, according to the published evidence of your townsman, Dr. Channing, till April 7, that the first case of the employment of anæsthetics in midwifery occurred in America, and the second did not take place till May 5. (See Dr. Channing's *Treatise on Etherification in Childbirth*, p. 26.) But before the date of these two cases the practice had been fully established in Edinburgh and elsewhere.

"Perhaps you and I, as parties implicated, are not adequate judges as to whether your statement on this point is candid and creditable, or utterly the reverse. But I willingly leave the decision of this to the feelings and verdict of an honorable profession.

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* I have elsewhere shown, in treating of the therapeutic history of sulphuric ether, that its employment by inhalation—first pointed out by Dr. Pearson in 1796—in asthma, &c., is mentioned by many writers on Materia Medica before 1846, as by Duncan, Murray, Brande, Christison, Thomson, Pereira, Nysten, Barbier, Wendt, Vogt, Sundelin, &c., in Europe; and its powers of producing effects like intoxication, or like the influence of nitrous oxide gas, are mentioned in America by Godman (1822), Samuel Jackson (1833), Wood and Bache (1834), &c. (See *Anæsthesia, or the Employment of Chloroform and Ether*, p. 100. Philadelphia, 1849.)

† When, however, in December, 1844, Dr. Horace Wells conceived the idea that the inhalation of nitrous oxide gas would render dentistry anæsthetic, he was evidently unaware of the previous suggestion of Sir Humphrey Davy. The idea occurred to him in consequence of his witnessing some person or persons at a public lecture and exhibition of the "laughing gas" at Hartford strike and injure their limbs against the benches without suffering pain. On the subsequent day Dr. Wells himself breathed deeply and fully the gas, and had a molar tooth extracted from his own mouth by Dr. Riggs without pain. *This was the first anæsthetic operation in America.* Thus, in that country, the idea itself of producing artificial anæsthesia by the inhalation of nitrous oxide gas, and the reduction of that idea to actual practice, occurred at Hartford, on December 11 and 12, 1844. The first anæsthetic operation at Boston, viz., the extraction of a tooth from a man named Frost, did not occur till September, 1846, or nearly two years subsequently. (See Official Documents, Appendix, p. 91.)

"You think I am greatly blameable because, in the way of omission, I did not advert to the previous application of sulphuric ether in America as an anæsthetic when the employment of chloroform was referred to. I think, on the contrary, that you are infinitely more blameable, because, without the slightest reason or ground—and in the way not of omission but of deliberate commission—you have in this letter of yours attempted to appropriate for your city and country what indubitably belongs to my city and country—namely, the credit of the first introduction and establishment of anæsthetic inhalation in obstetrical practice.

"I have the honor to be, yours truly,
"J. Y. Simpson.
"To Dr. Jacob Bigelow, Boston."

The official documents on the modern history of anæsthesia in America, referred to in the preceding letter, are contained in a thick but I believe unpublished volume of seven or eight hundred pages, printed at the expense of Dr. Morton, and entitled "Statements supported by Evidence of Wm. T. G. Morton on his Claim to the Discovery of the Anæsthetic Properties of Ether, submitted to the Honorable the Select Committee appointed by the Senate of the United States:" Washington, 1853. There is included a "Report to the House of Representatives of the United States of America vindicating the Rights of Charles T. Jackson to the Discovery of the Anæsthetic Effects of Ether Vapors, and disproving the claims of W. T. G. Morton to that Discovery." Those interested in the question will find the whole volume full of curious and important matter in the way of memoirs, documents, affidavits, examinations of witnesses, Congress and Senate Speeches, &c.

[We are usually chary of extracts from the publications of the Massachusetts Medical Society, because those publications reach the eyes of many of our readers. But, we trust that members of our State Society will cheerfully indulge others with the space occupied by the following passages from the address of Dr. Hitchcock to the Society at its last annual meeting. The subject of the paper is "Organic and Parallel Relation of some of the Practical Truths and Errors of Christianity and Medical Science."—Ed.]

The errors and superstitions of both Christianity and the practice of Medicine are *human*, and are not in any sense, as before stated, an integral part of their nature; and, though sometimes obscuring their lustre, do not permanently tarnish their purity or create a lasting doubt of their Divine origin. Errors and follies in Religion and Medicine, like counterfeits, which prove the existence of a genuine coin, will be always more or less current, in the world's market, so long as men love the pleasure of being cheated. One form of superstition and imposition displaces another, like Satan casting out Satan; or sometimes "seven worse spirits" rap in concert to empty and sweep the victim's house and garnish their own pockets. In contravention of all the truths and principles of Christianity and Science, religious and medical delusions, superstitions and crimes make a dark record in the page of history. Nor is that dark record yet finished. The foul drama is even now passing; the curtain has not dropped.

This may seem a strange anomaly in the midst of the self-congratulations of the age claiming superior knowledge, liberty and Christian civilization. *Clairvoyance* and *spiritualism*, or the practice of invoking the souls of the dead to cure the bodies and guide the morals of the living; *inebriety as a sin and a disease*; and *pre-infanticide*, not an imitation, but a forestalling of the work of Herod, together making a tripod of crime which in this nineteenth century not only permeates with leprous poison the heart of American society, but already, like a huge melanotic cancer, deforms its body and threatens to make it loathsome to sight and touch.

Scarcely a street in our cities, or hamlet in this commonwealth, but echoes the mumbling jargon of clairvoyants and spiritualists in their religious and medical contortions and pretensions.

They have revived the old Alexandrine or Sybilline *ecstacy*, without its genius or inspiration, promising its imbecile believers a superhuman science in the realm of mind, as well as matter, on condition of themselves first losing all consciousness, thought, liberty, memory, all that constitutes man an intelligent moral being.

They claim to converse with the spirits of the dead and evoke their presence and teachings for the good, or ill, of the deluded victims of their jugglery. This is one of the results of an ignorant or dishonest departure from revealed and scientific truth.

Pascal once said "that whosoever professed to become an angel became a beast," a truth often and shamefully verified by the clairvoyants, spiritualists and Free-loves of the present generation of impostors in religion and medicine. Cicero marvelled at the imperturbable gravity and mock honesty of the Roman augurs and soothsayers. He understood and satirized the deception.

In this modern age, so called, good Christian people look with amazing faith upon the contortions and cabalistic mutterings of the clairvoyant at the bedside of the sick, and marvel at the supernatural wisdom and skill of the performers.

The first Napoleon, for *reasons of state*, with an impressive air of sanctity, alternately played the Mohammedan, the Jew, the Catholic or the Protestant, as best suited the place or the occasion; while these juggling impostors, many of whom are Napoleons in ubiquity and cunning, have only *reasons of pocket* as their motive power. The most astonishing and deplorable feature in reference to the popular existence and practice of these delusions in this commonwealth is, the fact of the tolerance, nay the encouragement and patronage of them, by people who claim to be intelligent Christians.

The gyrations and gibberish talk of these modern impostors as they pretend to evoke lessons in religion, morals and medicine, from the soul of some sage or physician, dead centuries ago, are witnessed, believed in, and adopted by some of our modern Christians, who very properly shed tears of pious grief, and testify to the sincerity of their sorrow, by gifts of money to send teachers and missionaries to convert the Hottentots and Feejeans from precisely the same fetish rites and heathen incantations.

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Revelation has sometimes been worse used by its friends than by its professed foes in any of the attempts to show its antagonisms to Science. But with Chalmers and Hugh Miller, with Simpson and Agassiz and the late President of Amherst College, reinforced by a galaxy of minds in both professions who have sanctioned the indissoluble banns between science and religion, we have nothing to fear. None but dwarfed or corrupt minds in either profession will in this age attempt to repel or disown the truths of science, or make the futile attempt to assail the citadel of Christianity. The alliance between Christianity and medical science is complete; time and trial only strengthen it; and now, in spite of the occasional spasms of sceptics and wits, all sincere friends of Christianity and medical science, rejecting their parasitic follies and inanities, may give each other the hand of fellowship, and work in concert to heal the sick, to dissipate mental darkness, to encourage desponding hearts, and reform and lift up burdened characters. Notwithstanding the discouragements which the grievous follies and errors that formerly, and even now occasionally despoil the development and application of religious and scientific truth, the gleam of their grace and beauty will never fail to shine and warm through all the fitful darkness. This man or that in either profession may be deceived; this or that class of men may dream fantastic or poisonous dreams and play off cruel falsehoods upon the race, but all men and all generations will not be thus deluded. Somewhere in the world and in many minds the great primal, God-given truths which are the origin and power of both professions, emancipated from error, will ever live and expand to bless and perfect humanity.

Hospital Reports.

BOSTON CITY HOSPITAL.

Three Amputations in the Service of Dr. D. McB. Thaxter. Reported by Norman P. Quint, House Surgeon.

Case I.—*Amputation of Arm for Epithelial Disease of Hand; Recovery.*—Helen C., æt. 54, entered the hospital for the first time July 16, 1869, with the following history. Present trouble began one year ago as a small wart-like protuberance on back of right hand, covered with scabs. A discharge soon began to appear from under these scabs, and these falling off, left behind a small, open ulcer, which has been steadily increasing in size. After trying a variety of local applications, which proved of no service, amputation was advised. This the patient refused to have performed, and left the hospital. On Nov. 11th she again entered the house, requesting that the hand be removed. The condition of the hand at this time was as follows. The ulceration had involved the whole of the back and a portion of the palm of the hand, between the thumb and forefinger. In depth it had reached the metacarpal bones. First and second fingers, much displaced and swollen, were united to the hand at the palm by a small amount of diseased skin and muscle, being almost ready to drop off. The discharge was abundant and exceedingly offensive. General condition was miserable, and patient was much reduced by the great pain which she had suffered.

Patient was etherized on the following day, and forearm amputated at junction of lower and middle thirds, by skin flaps. Bones and muscles were seen to be soft and much degenerated. Three ligatures and four sutures were employed. Cold compress and bandage were applied. Evening.—Reaction good.

On the following day, patient expressed herself as much relieved from pain by the operation. Three days after the amputation, edges of flaps had adhered by first intention, except where ligatures passed out. No redness or swelling. Slight sero-bloody discharge. Sutures were removed. Dressing of carbolic acid wash applied. Whiskey, ℥iv., daily. Extra diet. Stump continued to remain in the same condition, and at the end of two weeks the union of the flaps, which was at first thought to be feeble, seemed to be strong and permanent. Two ligatures came away. A slight serous discharge occurred from the corner through which passed the remaining ligature. It was not until the end of the fourth week that this could be removed. General condition of the patient was very much improved. At the end of five weeks she was discharged from the hospital, well.

[The bones were so soft in this case that in the amputation the saw almost passed through of its own weight, and it was hardly thought possible for the stump to heal, on account of the low vitality of the tissues.]

Case II.—*Compouud Fracture of Leg; Amputation below Knee; Recovery.*—B. F. O'D., æt. 21, was brought to the hospital on the afternoon of Oct. 20th, with the following statements. About an hour before reaching the house, he was thrown from his team, by his horse becoming frightened and running away. In the fall he had the left leg engaged between one of the wheels of his own team and that of another, which was stationary. The leg was therefore immediately broken. Soon after the accident he received a large dose of whiskey, and when he reached the hospital he was in a very excitable condition. On examination of the leg, an oblique, compound fracture of the tibia at its middle, and a somewhat comminuted fracture of the fibula higher up, were discovered. Both bones were denuded of periosteum for some distance above and below the points of fractures. Two large openings through the integuments, the one on the anterior and the other on posterior aspect of leg, existed. After considerable delay, occasioned by friends of patient, who were reluctant to yield to advice given, he was etherized, and leg amputated four inches below knee, by making a posterior flap. Even at this point the muscles appeared black and congested, but it was thought advisable if possible to save the knee-joint. Considerable blood was lost, both before and during the operation, and at one time while under the influence of ether pulse failed very rapidly and respiration quite ceased. Enemata of brandy and ammon. carb. soon restored the circulation. Six ligatures and seven sutures were required. Cold compress and bandage. A few hours after the operation the pulse was 120 and full. No vomiting. Some venous oozing from stump. Sol. morph. sulph., ʒijss.

On the following day, pulse 112 and stronger. Flap looked well, and cold-water dressing was continued. In afternoon had a venous oozing, which was stopped by adjusting a tourniquet partially screwed down. On the third day the pulse was 100. Appetite improving. Bloody serous discharge from stump. Three sutures removed. On the sixth day general condition was much improved, and patient was more hopeful. Discharge suppurative in character. Dressing of carbolic-acid wash applied. At the end of the second week there was some adhesion of flap over tibia. Discharge healthy in character, but small in amount. Remaining sutures removed. Two ligatures came away. In the third week some small sloughs came away with the discharge from the interior of the stump. One more ligature was removed. At the end of the fourth week the stump had entirely healed, with the exception of a small sinus on outer side, made by the passing out of the ligatures. From this time the stump improved very slowly, as sinus exhibited but little tendency to heal.

During the treatment patient had four ounces of whiskey daily, and this was afterwards discontinued and ale substituted. Six weeks after the operation the patient was discharged, nearly well, with every prospect of soon having a sound and useful stump. Soon after leaving the hospital, a small piece of dead bone was removed from bottom of sinus.

Case III.—*Neuralgia of Stump; Re-amputation of Leg; Recovery.*—James O'C., æt. 58, entered the hospital Nov. 9th, with the following history. Seven years ago, patient had the left leg amputated in consequence of gun-shot injuries received during the war. States that he had extensive sloughing of the flaps, and that the bone protruded, but this was finally covered up with granulations. Since healing, stump has always been very tender, excluding use of an artificial limb. It has also been the seat of sharp, shooting pains, beginning at the middle of the cicatrix and darting up on the outside of the leg. Patient has a somewhat conical stump, with a small ulcer scabbed over at its centre. Patient enters house desiring a re-amputation. On Nov. 12th patient was etherized, and four inches of stump amputated by making anterior and posterior flaps. Smart hæmorrhage. Four ligatures and five sutures were employed. These last were not tied down to the flaps until six hours after the operation, so that in case of hæmorrhage access could be gained to the bleeding vessel. Stump dressed with cold compress. Reaction not very good. Whiskey ℥i. Morph. sulph. gr. ¼ subcutaneously.

On the next day, pulse 102. Anorexia. Stump undisturbed, but dressings were kept wet with carbolic-acid wash. Whiskey ℥iv. daily. Broth. Milk.

On fourth day, pulse 100. Patient restless in day and delirious at night. Potass. brom. gr. xx. at night. Ham splint adjusted to leg to relieve pressure of flap over crest of tibia. Slight suppurative discharge. Carbolic-acid dressing of compress, wet with wash.

Sixth day.—Delirium increasing. Frequently attempts to get out of bed. Potass. brom. gr. xx. every six hours.

Seventh day.—After having kept awake for three days and nights, patient finally fell into a troubled sleep, which continued for many hours.

Twelfth day.—General condition much improved. Edges of flaps have united, except for a short distance in the middle of line of junction. Discharge healthy. Ligatures came away in a mass.

Sixteenth day.—Patient has been suffering from an irritable stomach, from which he is now recovering. Stump has almost healed.

At the end of the third week, with the addition of a few days, stump had entirely healed. Occasionally had slight pains in stump. Pain, however, gradually disappeared, and at the end of the sixth week patient was discharged from the hospital, well.

On examination of the stump after its removal, the following appearances were found by Dr. S. G. Webber:—

"The posterior tibial nerve seemed to be larger than natural, and was folded over on itself at its lower extremity, so that the end of the nerve was directed upwards. The extreme end was enlarged into a bulk-shaped tumor, and was firmly adherent to a mass of cicatricial tissue. Thus the end was liable to be compressed between the cicatrix and the rest of the nerve. The posterior tibial artery was also bent into an S shape, and was suddenly lost in a band of connective tissue. Another small nerve was found, which terminated in a small, rounded point, without being bent or especially implicated in the cicatrix. Otherwise nothing especially interesting existed in the specimen."

Bibliographical Notices.

Obstetric Aphorisms for the Use of Students commencing Midwifery Practice. By Joseph Griffiths Swayne, M.D., &c. &c. From the Fourth Revised English Edition. With Additions by Edward R. Hutchins, M.D. Philadelphia: Henry C. Lea. 1870. 18mo. Pp. 177.

This little book we consider of great value to students and the younger members of the profession, provided they have been carefully instructed before they take it in hand. It is intended as a guide to such in their early dealings with the lying-in room. Its directions are sound, and they are clearly and succinctly given.

The paper and type are excellent.

There is now under the care of Dr. Wilks, at Guy's Hospital, an extremely interesting case, in which the patient, a woman 51 years old, states that she often rejects, in a fit of coughing, fluid nutriment from the chest. She has suffered for five weeks from chest affection, and there are indications of extensive disease of the right lung. From the age of the patient, her cachectic appearance, and the rapid progress of the disease, the most probable diagnosis in the case, according to Dr. Wilks, is cancerous disease of the œsophagus, involving the bronchial glands, the lungs, and some portion of the air-tubes in the right side.—*London Lancet.*

Medical and Surgical Journal.

BOSTON: THURSDAY, FEBRUARY 24, 1870.

THE HAVOC WROUGHT BY CHLOROFORM—FURTHER ADVICES.

A LEADING English Medical Journal not long since ackowledged that there was a growing feeling of uneasiness on the part of the British public, with reference to the inhalation of chloroform. After the article of last week was in type, communicated by our valued friend *Innominatus*, and alluding to the precautions recommended by the British Medical Journal, for the purpose of saving human life from the grasp of the deadly agent, the number of that periodical for January 29th was put into our hands. It contains a memorandum entitled "the administration of chloroform and of other anæsthetics," by C. Bader, Esq., assistant Surgeon to the Eye-Department, Guy's Hospital. In this memorandum are the following passages:—

"1. From February 2d, 1862, to December 10th, 1869, chloroform was administered at the operating theatre of the Eye-Department of Guy's Hospital to 3,224 patients (to 275 in 1862, to 297 in 1863, to 245 in 1864, to 385 in 1865, to 437 in 1866, to 639 in 1867, to 503 in 1868, to 443 in 1869).

"2. Nitrous oxide gas was given (for the first time on November 30th, 1868) to 26 patients.

"3. Sulphuric ether (with Keith inhaler) to 3 patients.

"4. Bichloride of methylene (given like chloroform) to 16 patients.

"5. Bichloride of methylene (given as shown to me by Mr. Wood) to 204 patients.

"6. Bichloride of methylene first, followed by chloroform, to 10 patients.

"Total number (up to December 10th, 1869) of anæsthesized patients, 3,483. This number only includes the patients operated on in the operating theatre of the Eye-Department. THOUGH NOT ONE DEATH HAS OCCURRED AMONG THE NUMBER, IT SHOULD BE STATED THAT A FEELING OF UNSAFETY WAS EXPERIENCED AT THE ADMINISTRATION OF THE ANÆSTHETIC IN EVERY CASE." [The capital letters are ours.]

"NO ACCIDENTS OF ANY KIND HAVE YET OCCURRED WITH THE NITROUS OXIDE GAS OR THE BICHLORIDE OF METHYLENE. The latter is of late used almost exclusively; it causes sickness, perhaps, in one out of thirty cases, turgidity of the face rarely, and anæsthesia, if properly given, in from twenty to forty seconds. Mr. Rendle was the first to administer the bichloride at the Eye-Department of Guy's. He gave it like chloroform; no sickness was expected to follow. The sixteen patients upon whom it was tried were very troublesome, difficult to get under its influence; many were sick. Its use was therefore discontinued."

The above extracts are at variance in one point with an editorial in the same Journal for Nov. 27th, 1869. From that editorial, the Italics being ours, we take a considerable portion, as follows:—

"*Recent facts have been by no means encouraging as to any diminution in the dangers of anæsthetics. We have had deaths from chloroform almost every week.* Nor have the zealous efforts of Dr. Richardson and others to provide us with a safer agent been rewarded by success. *The bichloride of methylene, although as yet employed on but a very small scale, has had its victim,* and has been so frequently the cause of very alarming symptoms, that most impartial observers of its effects have, we believe, come to the opinion that, whatever its other advantages, it is at least as dangerous as chloroform. We are not among those who think it well to try to explain away all occurrences of this kind, to impute them to unavoidable peculiarities in the patient, or to want of dexterity or care in the administrator. It is absurd to count, in the practice of surgery, on always having robust patients to deal with; nor is it wise to expect from ourselves more than a fair average of caution and skill. A plank bridge across the Thames might be perfectly safe to steady heads, and to those who had practised, but could scarcely be recommended for general use. Within the last few months, at one hospital alone, where the bichloride had been used, three different exhibitors have each had a very narrow escape of a death; and in the face of such a fact, it avails but little for Dr. Richardson and Mr. Rendle to assert that they have met with none such. Those who urge the general employment of dangerous remedies on the plea that, in their own hands, they have hitherto proved safe, remind us of the quibble of the Scotch judge, who had never, he asserted, known any one die of drinking, though he had, he asserted, known many lost whilst learning the art. Bichloride of methylene may, possibly, be safe to those who have carefully learnt its use; but, if it be very dangerous to those of but little practice, it will not do to recommend it for general adoption.

"*So far as we have yet gone, it seems very probable that chloroform will hold its place with the British profession as being the safest anæsthetic, which combines the recommendations of durable effect, rapidity of influence, suitability to all ages and states of health, freedom from after-consequences, and ease of administration. Indeed, we may suggest that it is,* à priori, *improbable that we shall ever find any agent which can rapidly extinguish almost all the functions of the nervous system, without any risk that it may now and then do more than we wish, and put into abeyance those we wish to spare, as well as the others.* In this matter, speed is probably inseparable from danger.

"It becomes, then, of the utmost consequence to try if the lamentable accidents which occasionally happen from chloroform can be reduced in number. In order to place ourselves fairly in the direction towards this most desirable end, we must recognize candidly the facts. *We must admit first that, in almost all the cases in which death occurs during chloroform-sleep, it is caused by the anæsthetic; and that facts prove that it is impossible to predicate anything as regards the individuals to whom such accidents are likely to happen. A "fatty heart" does very well to mention to a coroner's jury, and may possibly now and then afford some comfort to the unfortunate administrator; but, beyond these purposes, we must not use it. Chloroform-deaths have occurred in sufficient numbers to young persons in unexceptionable health, whilst, on the other hand, such hosts of the feeble have passed safely through the ordeal, that it is impossible to believe that the lesions occasionally found have any definite connection with the untoward event. Events seem to have proved, too, that we must abandon all trust in inhalers, and acknowledge what our Scotch* confrères *have long been telling us—and enforcing by an unusual run of immunity—that the simplest are the best. The use of the minim measure as a means of security must also be put quite aside.* Those who have been accustomed to pour on a handkerchief as much chloroform as seemed necessary, and then hold it closer or less close, according to judgment, must often have experienced melancholy amusement in noting the piteous way in which, at an inquest, the exhibitor will inform the coroner that he had "given only forty-five minims by measurement." Such precision sounds very fairly on such an occasion, but we fear that it conduces nothing to the patient's safety. This and some other fanciful precautions always look to us as if the exhibitor were making preparations for the witness-box, and remind us of the ready but impolite reply once made to a cross-examining counsel, who, asking the reason of his witness's minute accuracy as to distances, was told, "I thought some fool might ask me, and so I measured them." We are even in doubt as to whether the tenor of this remark does not also apply to the custom of holding the patient's pulse. To this, and to all other supposed precautions, the strong objection applies, that, unless really useful, they are better let alone, for the reason that they distract attention from more important matters. If several surgeons are present, there is no kind of objection to the rule that one of them should take the patient's wrist; but it is somewhat different if that task is to fall to the exhibitor. It is not possible for the mind to give attention to many different things at once; and, if you are scrupulously watching the patient's face and breathing, you will often find yourself holding the pulse, it is true, but paying no real attention to the force of its beats. That the patient's countenance and breath-movements give more information than his wrist-pulse, is tolerably certain. In saying this, however, we would guard ourselves most carefully against implying that the state of the circulation is to be neglected. What we mean is, that the state of the circulating forces is more accurately estimated by the appearance of the sleeper's cheeks, lips, and eyes, than by the force of the radial pulse.

"*Another point which must be kept constantly in mind by chloroform-administrators is, that no case is safe. It is just when danger is the least thought of, that it comes. To the most healthy person, the induction of profound anæsthesia is a state most on the borderland of death. Your design is to take a man to the edge of a precipice, and not let him jump over. The task will demand all your skill; and the fact that you have done it safely a thousand times does not make it certain that you may not yet have an accident.* It is obvious that the administrator should give his whole attention to his task—should abstain from conversation, and from any attempt to observe the operation. From this it follows that it is very desirable, when possible, to have a qualified surgeon present, to whom this duty, and this alone, is entrusted. Under many circumstances, such may not be possible; but it is none the less to be recommended. The large number of accidents which have occurred in private practice, and often during preparation for trivial operations, makes it probable that in many the patient ran additional risk, owing to a short-handed staff. In making this remark, we by no means wish to ignore the fact that many accidents have happened in hospitals, with plenty of help at hand, and have occurred to experienced chloroformists. Want of assistants is, however, attended by danger in two ways: first, that the patient may be inefficiently watched; and secondly, that, in case of accident, the means of resuscitation may not be properly attended to. We half suspect that the latter point is the more influential. *In hospital practice, many patients are saved after the occurrence of most alarming conditions, and even after apparent death. Not a few of these cases, under other less favorable circumstances, would probably end otherwise.*"

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"*There is no special risk in cases in which the heart is known to be diseased.*" * * *

It will be noticed that Mr. Bader's statement to the effect that no accidents have occurred with the bichloride of methylene, ignores the previously made remark of the editor, that Dr. Richardson's anæsthetic has had its victim; and is also erroneous with reference to nitrous oxide gas, to which two deaths have been attributed in this country. It will besides not escape attention that of the 3,224 chloroform cases cited by Mr. Bader, 45 presented more or less alarming symptoms.

But, that point which stands out in boldest relief from among the extracts we have quoted, is this—that the editor of the *British Medical Journal,* the organ of the British Medical Association, while saying that there have been deaths from chloroform almost every week; that in almost all the cases in which death occurs during chloroform sleep, it is caused by the anæsthetic; that facts prove it impossible to predicate anything as regards the individuals to whom such accidents are likely to happen; that chloroformists should keep constantly in mind that no case is safe; while saying all this, this representative man of the British medical profession declares it probable that with that distinguished body chloroform will hold its place as being the *safest* anæsthetic, which combines the recommendations of durable effect, rapidity of influence, suitability to all ages and states of health, freedom from after-consequences and ease of administration. And yet, though sulphuric ether unites in itself all that is essential in these recommendations, and is at the same time as much safer than chloroform, as fire is more manageable than lightning, the former agent is not so much as named by this eminent Journalist. As "Innominatus" suggests, have the medical men of Great Britain so long and so sedulously ignored the one harmless anæsthetic which has thus far been known to science, that they sometimes forget its very existence?

Again! Our trans-Atlantic editor with bitter irony says, "a fatty heart" does very well to mention to a coroner's jury; and may possibly now and then afford some comfort to the unfortunate administrator; but beyond these purposes we must not use it. A candid and timely admission! But, a coroner's inquest, forsooth! What if one of Her Majesty's accomplished surgeons should some day be called to account for the life of a patient whose heart might have forever ceased to beat under the spell of the deadly vapor; and should find himself arraigned for manslaughter before that grand culmination of the British constitution, *twelve men in a jury box?* The counsel for the Crown puts the question—is no anæsthetic safer than chloroform known to medicine? What would be the answer under oath? And what verdict would be likely to fall upon him who—*not inconsiderately, but with deliberate calculation*—had neglected the safer to employ the fatal drug? Alas! "homicides by chloroform" may indeed hold their place with the British medical profession until some one of that association shall have been subjected to a criminal trial for its—abuse.

The medical men of the French city of Lyons have declared for ether, and against chloroform, as those of this city did some years previously. M. Petrequin, Ex-Surgeon-in-chief of the Hotel Dieu at Lyons, uses these words, as translated for this Journal in 1868:—"In conclusion, it is evident that the danger lies in chloroform itself. If it kills, it is not because it is impure; *it is because it is in its nature a poison*—a fact shown unquestionably in experiments upon animals, as well as in human pathology.

"In the actual state of science, then, the only way to avoid the censure of society, to secure the protection of justice, and above all to remain at peace with one's own conscience, is to discard forever a dangerous agent, which every time that it is used puts at hazard the fearful question of life or death."

Forgetting the bright example of the Medical Faculty of Lyons, and passing unnoticed the recent invectives against chloroform of leading medical men and journalists in this country outside of New England, the editor of the *London Medical Times and Gazette* declares that with the exception of Boston the entire world seems to be of accord that the agent we condemn is a preferable anæsthetic to ether. In reply we do not hesitate to assert that the whole world will ultimately banish the administration of chloroform by inhalation from medical practice; and that history will record it as a blot upon the records of the present generation that the employment of that death-dealing drug has been so long sustained. We are sure that the accomplishment of this reform is only a question of time; but all of the profession who are of our way of thinking should do their utmost, laboring in season and out of season, to hasten the event, from the motive appealed to in connection with this subject, by the editor of the *Union Médicale*, Amédée Latour—"the absolute and supreme respect for human life which gives grandeur and dignity to our art."

THE FATALITY AT GREAT BARRINGTON.

SINCE handing to the printer the preceding article, and also the notice on another page which is credited to the *Boston Herald* under our regular caption of "Deaths from Chloroform," we have received a copy of the *Berkshire Courier* containing a full account of the sad occurrence at Great Barrington. We quote the following very appropriate and straightforward letter addressed to that newspaper by W. H. Parks, M.D., who administered the chloroform; remarking by the way that we have no connection or acquaintance with our unfortunate namesake:—

"MR. EDITOR,—The sudden death of Mrs. Foote, on Saturday afternoon, having awakened the sympathy of the entire community, and given rise to many inquiries and rumors concerning it, I send you the following report of the case, which you are at liberty to publish as a matter of public interest. Mrs. Foote, of Sheffield, aged 36 years, called on Saturday, the 12th inst., at the dental office of Dr. Rice in this village for the purpose of having some teeth extracted. I was requested by the husband to administer chloroform, he stating that she had once before taken it without ill effect. Mrs. F. being apparently a woman in good health, I consented to administer it. It was given in the usual manner, by pouring a small quantity upon a napkin, held at a little distance from the face in order not to interrupt a sufficient supply of atmospheric air. No unusual effect was produced until after twelve teeth were extracted, when for the moment she manifested signs of returning consciousness, and while leaning forward in the act of retching or vomiting, after two or three ineffectual attempts she suddenly expired. I was supporting the head at the time, with my fingers pressing upon the temporal artery, the pulsation of which I could distinctly feel. The first intimation of danger perceived was the sudden cessation of the pulsation, when after a few gasps she ceased to breathe. I immediately placed her in a horizontal position, and kept up artificial respiration for half or three quarters of an hour, when, perceiving the hopelessness of the attempt, further efforts were abandoned. It is to be regretted that her friends were not willing that a *post-mortem* examination should be had, as there is some reason for suspecting the existence of an organic disease of the heart. Be this as it may, however, there is no doubt that death resulted from asthenia of the heart induced by the inhalation of chloroform, and the existence of an organic disease of this organ would only have contributed to the danger of such a result. W. H. PARKS, M.D.

Accompanying the newspaper we are favored with a letter from L. Miller, M.D., of Stockbridge, who informs us that from some cause the friends of the deceased concluded that a *post-mortem* examination should be held just before the burial; and that the autopsy "discovered no organic disease, and no serious variation from the normal standard of health." Dr. Miller states that no one doubts the skill or ability of the physician who administered the anæsthetic. From the letter of the latter gentleman to the *Courier*, we infer that the inhalation was administered as carefully and scientifically as it is ever possible to conduct the inspiration of chloroform.

The measure resorted to by Dr. Parks for the restoration of the patient—viz., prolonged artificial respiration—was precisely that on which we for ourselves believe chief reliance should have been placed. And it ought to be borne in mind that some of the leading foreign authorities who urgently advocate the administration of chloroform inhalation, specially warn operators against being diverted from the faithful carrying out of this, in any flurried eagerness to use "every means" that could possibly be thought of. We presume that nothing short of power to raise the dead could have brought the patient back to life after it was first perceived that respiration had stopped; or even perhaps at the moment when the artery ceased to pulsate. It is the same story we have been for some time past seeing repeated nearly every week in one or another medical journal, of inhalation of chloroform by a patient presenting no symptom to indicate special danger from its use, perhaps having breathed it before with impunity—skilful administration of the anæsthetic—failure of heart-beat and respiration—sudden or instantaneous death.

The responsibility, in this case, rests, we take it, not upon the medical man alone who held the anæsthetic vapor to the mouth and nostrils of the patient, but also upon any other physician who may have been present and countenanced its administration; and in a lesser degree besides upon the patient who solicited it, upon the husband who permitted it, and upon the public which tolerates the practice of *chloroform* inhalation. If this deplorable event should arouse public opinion and crystallize it into legislation to forbid that fatal practice, it may well be a melancholy consolation to the parties now living who were immediately concerned in the unintended tragedy to look upon their mental sufferings as a martyrdom in the cause of humanity.

The Chief of the Bureau of Medicine and Surgery, in calling the attention of the Secretary of the Navy to the difficulties experienced in officering the Medical Corps, points out the causes, and suggests the remedy, which, unfortunately for the efficiency of the service, is not agreed to by Admiral Porter.

"The chief difficulty," says Dr. Wood, "lies in the fact that the usages of the naval service and the want of proper legislation place medical men in the navy *below the average respectability* of the profession in civil life. Individual respectability being the same in both cases, the position of respectability which is obtained in civil life from popular approbation, can only be secured in military life by legislative enactment, and is known under the term of Medical Staff rank, when applied to medical men. I shall not present any views in the interest of any class or section in the navy, but only such as seem to me to be essential to the good of the whole navy, so far as the medical corps is related to that good." * * *

"Efforts to ignore instead of utilizing as a power, the strongest influences of human nature, or to satisfy them by putting shadowy forms for substantial rights, have agitated our naval service from its beginning. They have interfered much, not only with its efficiency, but also with that harmony which among men of equal social position, cultivation, and refinement, might be some compensation for the exactions and dangers which belong to the naval service, and are shared together.

"It is a subject of much regret, and perhaps of reproach, that the United States naval service alone should continue the agitation of failing experiments, while every other military service in the world has reached harmony and efficiency, by a full acknowledgment of the principles of Medical Staff rank.

"That gentlemen of all ages, and with every variety of mental endowment and moral discipline, embraced by the medical corps, have with unbroken unanimity, from generation to generation, and despite the discouragements of failure, still contended unflinchingly for the protection of staff rank, proves that the claim embodies a life and dignity which no unmeaning vanity could assume or persistingly maintain."

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"The first practical object of all legislation and regulation relative to the Medical Corps, is to secure for the officers and men of the navy the best average medical skill and ability which our country, or, indeed, any country, can afford; for, in the shrinking of our own people from the naval service, we have been indebted to the aid of able foreigners. Those who encounter naval hazards are entitled to the most capable medical and surgical aid; the Government also has a pecuniary and natural interest in providing every security for the efficient physical and moral ability of those whom it educates and employs.

"One other consideration, demanding a high order of professional ability, is incident to our influence among the peoples of the world, and found in the fact that the Medical Officers of the navy come in contact with the professional men of other countries and other navies. Therefore national self-respect should require the naval Medical Corps to be especially of such a character as would, in such circumstances, honorably represent their country. It is certain none of these requirements can be met unless the Government offers to medical men such inducements to enter its service as will compete with the fair hopes and inducements of civil life, and be some compensation for their surrender, which is largely made, of that personal liberty and privilege which, under other circumstances, are the natural right of every adult." * * *

"All these essential considerations are embraced by a memorial signed, in 1816, by a majority of those distinguished captains, among them such names as Bainbridge, Hull, Rogers, Trenchard, Jones, and Warrington, whose deeds made their own fame and the glory of our navy in the war of 1812, and expressed in the following words:—

"'We feel it, therefore, as a duty incumbent on us to state that we consider the Medical Department of such great importance to the navy of our country that no reasonable measures ought to be omitted which could have a tendency to retain in the service the professional ability of those gentlemen who, by their experience, knowledge, zeal and humanity have procured the esteem and confidence of those with whom they have been associated; and we also beg leave to express our belief that no reasonable inducements would be objected to by Congress to procure for those who are engaged in a perilous service, and who are constantly exposed to the diseases of all climates, the best medical aid which the country affords. To effect this, it must be obvious that the rank and pecuniary emolument of medical officers ought to bear some proportion to what gentlemen of professional eminence would be entitled to in private life.' * * * * *

"Both in civil and military life, the best incentive to duty, outside of a conscientious conviction of duty, is the hope of the approval of that judgment or authority under which life is lived and duty done. In this hope the Government has a large power to secure, by a just distribution of its honors, a high order of professional ability and character, and to substitute a cheerful and proud performance of duty for the cheerless and despondent spirit which now overshadows the senior officers of the medical corps who are fixed in the service, and has almost annihilated the junior branches of the corps. No young men who are competent to pass the modern examinations of the naval board are seeking admissions to the navy, and those who were successful in entering are rapidly escaping from it.

"There have been *fifty-three resignations* among the medical officers for the last four years from a *corps of two hundred* (but one of them discreditably to the officer), and *only one of them has been filled, and it is impossible now properly to officer the ships and hospitals.*

"These losses are greatly to be deplored, as many of these young officers had the experience of the war, and had displayed eminent ability, and, should the proper remedy be now applied, it will be years before the loss can be recovered.

"The administration of a naval medical charge requires an education of its own, only to be acquired practically on shipboard, embracing the subjects of pensions, malingering, nautical hygiene; and as the officer advances in the service, and has his sphere of duties enlarged, having charge of our large hospitals and medical charge of squadrons, they become administrative as well as professional, and have within them the direction of large fiscal interests, requiring intelligence, experience and probity.

"The losses we have sustained, and the existing aversion to the naval service, are the natural and inevitable results of the infraction of the laws I have endeavored to point out. If the medical corps is not honorably and efficiently maintained by a just share of the routine honors of the navy, it can only be done by lowering the standard and taking men who will accept professional humiliation as a means of livelihood.

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"It will scarcely be asserted that any

military organization can exist without a staff corps, nor will it be denied that the efficiency of the organization is proportioned to the ability of the staff corps. This fact is evident from the term used, meaning a sustaining power.

"It is proved by the prominence given staff corps by all the military heroes of history, and by the high rank given staff officers in every perfect military institution. No such institution can rise above the depressing weight of an inferior staff corps.

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"Whatever is done, it is clear should be done in so earnest and significant a manner as to have a substantial meaning. Better that no rank whatever be given than a rank in words, to be nullified in practice, or made to have only an exceptional use. Such a hybrid combination is barren of all fruitfulness. Why, for instance, should it be said that any class of officers should have such a rank, but not its indications and honors, unless the occupation of the officer works stain and corruption to the honor he has earned? Better say frankly, the service rendered merits the honor, but the occupation is beneath it. Why should the rank of a medical officer in our naval service be made to yield to that of a junior line officer, unless that line officer be in the position of command? * * * *

"As some testimony to the truth of the views I have offered, and also that they do not originate in a spirit of professional partizanship, I am able to refer to the late Admiral Foote as very much dissatisfied with the existing condition of the medical corps, and as an earnest advocate for giving it high staff rank. It was by his advice that the Navy Department gave the staff corps, as a war acknowledgment, that increase of rank which has recently been pronounced invalid for want of legislation. Also, I have the authority of a distinguished rear-admiral, now on the active list, for saying, after severe comment upon the position of senior medical officers in the United States Navy, that, in his opinion, 'the fleet-surgeon should be in our service, as in the French, exclusively a member of the Commander-in-Chief's staff and family.'

"If the authorities who control this subject could be influenced by such liberal views as these, there would be no difficulty in honorably officering the medical corps, and class dissensions would end."

A strong and urgent petition to the Senate has been signed by the Medical Faculty of Harvard University, and forwarded to the Hon. Charles Sumner for presentation. It is to be hoped that the just claims of the medical fraternity of our country will be recognized by Congress, and that the present injudicious and demoralizing policy of the Navy Department will be broken up by the passage of the "Stevens Bill" by both Houses of our National Assembly.

PROFESSOR BIGELOW'S FINAL REPLY TO PROFESSOR GUNN.

Mr. Editor,—The question of injustice, which is alone at issue between Professor Gunn and myself, refers to two points, viz.:

1. Did he, in opposition to the Y ligament theory, assign several different parts of the hip capsule as the essential cause of the phenomena of hip dislocation?

Unquestionably he did.

For example, he pointed out the anterior part for the dorsal, and the posterior part for the pubic dislocation.[*] My statement, of which he has so loudly complained, is correct.

2. In his two dorsal dislocations, did Professor Gunn, when he designated the anterior "half" of the hip capsule, point out the ilio-femoral ligament, which is a portion of this half?

Clearly, not.

He entirely fails to show that the ilio-femoral ligament even occurred to his mind, "in this relation," until my book was published. He had previously designated the capsular ligament loosely by "halves," and offers no evidence that in so doing he had analyzed or dissected the anterior half more than the posterior half.

The Y ligament theory in hip dislocations will in time pass for what it is worth. It is not the subject of the present discussion, and I therefore do not follow the new issues of Professor Gunn. If his fears of circumduction, which are shown to be unfounded, compel him to resort to a Jarvis's adjuster,[†] in order to reduce a thigh by manipulation, I leave to him the task of convincing the astonished reader that this is an expedient of "skill not force."[‡]

The imputation of injustice, which has caused me some solicitude, is the only issue between us. I have shown that no injustice has been done to Professor Gunn, and therefore leave the discussion here.

Henry J. Bigelow.

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[*] Luxations, &c., p. 20, line 29.

[†] Ibid, pp. 13 and 14.

[‡] Ibid.

Dr. Meredith Clymer, in a note on the history of relapsing fever in the United States, says:—

Sir,—Having seen a number of cases of the kind of fever now prevailing in this city, I am satisfied that it is essentially the same which I observed and described twenty-five years ago.* In June, 1844, a ship arrived at Philadelphia from Liverpool with Irish emigrants, amongst whom there had been some sickness during the voyage. Fifteen were sent to the Philadelphia Hospital, and admitted into the medical wards under my charge. They were suffering from continued fever of a kind different from any that I had ever seen. I thought that I recognized, by the published histories, the kind then prevailing epidemically in Scotland and England, and which had appeared in those countries in 1843. The correctness of my conjecture was soon established. In all these cases the access was sudden, with severe headache, vomiting, muscular soreness and joint-pains, rapid pulse, hot skin, a moist tongue with a creamy grey or yellowish coating, and red tip and edges (though in a few cases the tongue and mucous membrane of the mouth were quite dry for several days), enlarged spleen, no constant intestinal troubles, and no eruption. In all there was much debility from the outset, and the face had a peculiar bronzed tint, like that of persons suffering with malarial poisoning. About the seventh day defervescence happened, with abundant sweats; the appetite became good, the expression was natural, and the patient apparently entered upon convalescence, though still complaining of muscular weakness, and the face was of a dusky yellowish hue. Near to the fourteenth day a second paroxysm suddenly occurred, in some cases with the acuteness of the first, and lasting for five or six days, whilst in others it was slight, and passed off in thirty-six or forty-eight hours. So far as I know, there were no instances of a second relapse. I saw no sequelæ, for the reason, perhaps, that patients left the hospital very soon after the establishment of the second convalescence. None of the house physicians, or nurses, or other patients contracted the fever, and the only evidence I had of its possible contagiousness was the fact of two sisters, for some years resident in Philadelphia, being admitted with the fever, and whose brother had gone from the ship to their house, and there been taken ill. Other steerage passengers were at the time in the hospital, complaining of chills, sweating, aches, headache, debility, &c.; but none of these were ever fairly down with the fever. * * * * —*Medical Record.*

Action of Nitric Acid upon Extract of Indian Hemp.—Messrs. Bolas and Francis found that when the resinous extract of Indian hemp was treated with nitric acid, sp. gr. 1·32, a violent action, accompanied with a copious evolution of nitrous fumes, took place. When the action had subsided, the flask was heated for five hours in a water bath; the residual resin was again treated with nitric acid, sp. gr. 1,420; the clear acid solutions were then evaporated to dryness on the water bath, the resinous portion remaining in the flask being again treated with nitric acid, and so on until the whole was dissolved. The residua obtained on evaporating these acid solutions were then washed with water and dissolved in spirit, from which it crystallized in long flat prisms. When pure it is white, and gives an alcoholic solution neutral to test paper. It does not contain nitrogen. It gave on combustion numbers agreeing with the formula—$C_5 H_6 O_2$. The acid liquors which have deposited "oxy-cannabin" yield on further evaporation a small quantity of an acid substance, which crystallizes in plates. —*Medical Press and Circular.*

The illustrious deceased physician, Trousseau, was born in 1791. He formerly taught rhetoric at Chateanroux. He studied medicine under Bretonneau, of Tours. He was elected, in 1848, a member of the French National Assembly, and on the fall of Cavaignac he gave up politics and took entirely to medicine.—*Ibid.*

DEATHS FROM CHLOROFORM.

Fatal Tooth Pulling.—Mrs. Bradford Foote of Sheffield died from the effects of chloroform in the office of Dr. W. W. Rice, in Great Barrington, Mass., Saturday afternoon. Mrs. Foote called at the office to have a number of teeth extracted, and requested Dr. Rice to administer chloroform. He reluctantly consented to do so, as Mrs. Foote did not appear in perfect health. The chloroform was given by Dr. W. H. Parks, who was called in for that purpose. Twelve teeth were extracted, and Mrs. Foote had partly recovered consciousness, when she suddenly seemed to choke, and died in a few moments.—*Boston Herald, Feb.* 17, 1870.

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* Fevers: their Diagnosis, Pathology and Treatment. By Meredith Clymer, M.D. Philadelphia: 1845, pp. 99.

Medical Miscellany.

Admiral Farragut and the Reorganization of the Navy. *Washington*, 13th.—Admiral Farragut has written Secretary Robeson a letter, which will be submitted to Congress to-morrow, giving his views on the pending House bill for the reorganization of the Navy. The Admiral approves of the provisions of the bill, and urges the establishment of a Board of Admiralty, of which the Admiral of the Navy should be President, and the appointment of ten Medical Directors, with the assimilated rank of Captain, to be placed in charge of hospitals and asylums, and of twenty engineers with the assimilated rank of Commander. He also insists on the right of the executive officers to precedence over all others while in the discharge of their duty, and in reference to the staff and line controversy says:—

"In the beginning of this contest I felt desirous to do justice to the merits of such staff officers as had served in my command, and whom I know had been equally exposed to the dangers incident to the profession, and hence, when Surgeon Palmer appealed to me to know if I had any objection to a certain bill which provided for a higher grade for the older officers I readily answered in the negative, saying I thought that the older officers of the staff corps who had served their country faithfully, and had shared all the privations of war equally with the line, had a natural right to expect to be promoted to a higher grade in their respective corps. At that time I did not deem it possible that the feeling could become so violent, and while my opinion, then circulated, simply advocated a deserved reward for merit, and at the same time placing such officers at shore stations, so as to prevent contact with the officers of the line of the same grade, I am glad to find that all the Boards and the honorable Secretary are now as ready to accord to them this preferment as myself. During all this time I have been prepared to express my opinion without prejudice or partiality, but have studiously avoided to do so until such a time as it was called for by authority."

The last lecture of the Course on Anatomy and Diseases of the Ear, by Dr. C. J. Blake, at the Dispensary corner Bennet and Ash Streets, will be given Tuesday, March 1st, at 9 A.M. Attendance of members of the graduating class is especially requested.

Dr. W. Warren Greene has had three successful cases of removal of bronchocele. In the last case the bronchocele was double and of immense size.

Flint Implements from Africa.—The flint-implement makers—whether men or "the missing link"—appear to have been ubiquitous. We recently heard of these weapons having been found in the Cape Colony, where none of the existing races use them, and now Messrs. Hamy and Lenormant have written to the Academy of Sciences announcing that a large quantity of wrought flints, of well known types, have been discovered in Egypt. These gentlemen suppose that there was "a factory of the Neolithic period" on a plateau near the valley of Biban-el-Molouk.—*Medical Times and Gazette.*

Books and Pamphlets Received.—Modern Therapeutics: A Compendium of Recent Formulæ and Specific Therapeutical Directions. By Geo. H. Napheys, A.M., M.D., Philadelphia. 12mo. Pp. 300.—Report of the Pennsylvania Hosp. for the Insane, for the year 1869. By Thomas S. Kirkbride, M.D., Physician-in-Chief and Superintendent. Pp. 48.—Transactions of the New York Academy of Medicine, Vol. iii., Part vii. Physiology and Pathology of the Sympathetic or Ganglionic Nervous System. By Robert T. Edes, M.D. An Essay to which the O'Reilly Prize was awarded by the New York Academy of Medicine, May 5, 1869. Printed for the Academy. Pp. 152.—Address delivered before the St. Clair and Sanilac (Mich.) County Medical Society, by the Retiring President, together with Reports submitted at the Annual Meeting, Aug. 10, 1869. Pp. 20.—On the Influence of Mental Activity on the Excretion of Phosphoric Acid by the Kidneys. (Silliman Prize Thesis.) By Luther Hodges Wood, Ph.B., M.D. [From the Proceedings of the Connecticut Medical Society.] Pp. 18, and nine diagrams.—Reports of the Trustees and Superintendent of the Butler Hospital for the Insane, January 26, 1870. Providence, R. I. Pp. 36.

Married,—At East Boston, 16th inst., Richard M. Ingalls, M.D., to Miss Mary E. Shattuck, both of East Boston.

*Deaths in seventeen Cities and Towns of **Massachusetts** for the week ending Feb. 19, 1870.*

Cities and towns.	Number of deaths in each place.	Prevalent Diseases.	
		Consumption.	Pneumonia.
Boston	105	22	6
Charlestown	7	1	1
Worcester . .	13	2	2
Lowell	20	3	2
Milford . . .	6	2	0
Chelsea . . .	6	1	2
Cambridge .	20	3	6
Salem	11	2	0
Lawrence . . .	7	1	0
Springfield .	7	1	1
Lynn	6	1	0
Pittsfield . .	5	0	0
Taunton . .	4	0	0
Newburyport	2	1	0
Somerville .	5	0	1
Fall River .	8	1	2
Haverhill . .	1	0	0
	233	41	23

There were nine deaths from scarlet fever in Boston, and none in the other cities and towns. Boston reports four deaths from smallpox, and three from measles. Lowell reports three deaths from measles. From all the above places there are reported eight deaths from croup and diphtheria, and four from typhoid fever.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending February 19, 105. Males, 44—Females, 61.—Abscess, 1—accident, 1—anæmia, 1—apoplexy, 2—inflammation of the bowels, 1—disease of the brain, 3—inflammation of the brain, 2—bronchitis, 5—cancer, 1—consumption, 22—convulsions, 2—croup, 1—debility, 2—diarrhœa, 1—diphtheria, 2—dropsy, 1—dropsy of the brain, 1—dysentery, 1—epilepsy, 1—erysipelas, 4—bilious fever, 1—scarlet fever, 9—gangrene, 1—hæmorrhage, 1—disease of the heart, 2—disease of the liver, 3—inflammation of the lungs, 6—measles, 3—old age, 3—paralysis, 2—peritonitis, 1—pleurisy, 2—premature birth, 2—puerperal disease, 1—rheumatism, 1—smallpox, 4—suicide, 1—teething, 1—unknown, 4—whooping cough, 1.

Under 5 years of age, 30—between 5 and 20 years, 16—between 20 and 40 years, 32—between 40 and 60 years, 13—above 60 years, 14. Born in the United States, 75—Ireland, 19—other places, 11.

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Original Communications.

REDUCTION OF DISLOCATIONS.*

By Wm. Warren Greene, M.D., Professor of Surgery in the Medical School of Maine, &c. &c.

In the discussion of this subject I shall confine myself to the consideration of two main questions.

1st, What is the principal obstacle encountered in our efforts at reduction?

2d, What rules of procedure should guide us in the treatment of these injuries?

If an answer to the first question is sought for in the surgical text books of the day, it will be seen that *muscular resistance* is universally deemed to be the great hindrance to reduction, and upon this idea are based the various methods of treatment recommended by surgical writers, from Hippocrates down to the present time. It is true that some authors admit other subordinate agencies, and Gross, with a characteristic breadth of view, attaches much importance to the great ease with which luxations are occasionally reduced even in muscular subjects, and on the other hand to the great difficulty oftentimes experienced in relieving these deformities even after complete muscular relaxation has been produced by venesection, nauseants and anæsthetics; and he argues that the catching of the head of the bone under the muscles and tendons, the small size of the aperture in the capsule through which it has escaped, and the interlocking of the various prominences and depressions so common in the vicinity of articulations and so marked in certain localities, must occasionally prove serious obstacles to reduction. Still he does not, nor, so far as I know, do any of the systematic writers on surgery recognize these conditions as other than occasional and minor in their operation. I think conclusive evidence of professional opinion on this subject, at the present time, may be found in the last edition of Erichsen's Surgery, the American reprint of which Mr. Lea of Philadelphia has issued within four months past. This really excellent work, which in most respects is fairly up to the times, may be assumed to teach the modern views and practices of the great majority of surgeons; and in the chapter on Dislocations, under the head of Treatment, page 291, the author makes this plain and unqualified statement. "The great obstacle to reduction is the *tonic contraction of the muscles* inserted into or below the displaced bones, and the surgeon's efforts are chiefly directed to overcome this contraction."

As my own belief and corresponding practice is diametrically opposed to this statement, I will first state it, and then indicate the line of thought through which I was brought to my conclusions.

Since February, 1856, I have believed and taught, for the last nine years publicly, as my classes in Berkshire Medical College, the Medical School of Maine and the University of Michigan can testify:—

1st, *That the main opposing force to the reduction of dislocations is the untorn portion of the capsular ligament.*

2d, *That in our efforts at reduction the primary object should be the relaxation of the untorn portion of this ligament, and that whatever mode of procedure accomplishes this with most facility is the best.*

3d, *That occasionally the small size or peculiar shape of the rent in the capsule, or, in peculiar conditions of the nervous system, muscular contractions, may constitute the major forces with which we have to deal; but that these cases are so extremely rare as not at all to invalidate the general rule.*

I desire at this point to call attention to the fact that these propositions are not restricted to special dislocations, either as regards locality or variety, but apply to this class of injuries generally.

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* Mr. Editor,—Nearly two years ago I began the preparation of a paper upon the Reduction of Dislocations, which ill health prevented my finishing.

This work was undertaken both from an inclination on my own part to place before the profession doctrines which I deem of great importance, and also in accordance with the often expressed wish of many of my pupils that I should put on record views which they have found so valuable after testing them in practice.

With returning health I find my disposition for the work revived, while my conviction of its importance has been deepened by additional reflection and experience.

I have, therefore, written this paper, which, imperfect as I know it to be in its treatment of the subject, having been prepared amidst the constant pressure of other labor, contains ideas that I feel sure are worthy of the careful attention of my professional brethren. W. W. G.

Portland, Oct. 25, 1869.

When a student of medicine in 1852 I became acquainted with Dr. Reid's views, then just published, upon reduction of the upward and backward dislocation of the head of the femur by manipulation. In a conversation upon the subject with my venerable friend, the late Dr. Young B. Walker, of Waterford, Me., he informed me that he had repeatedly effected reduction by a similar procedure which he learned from his preceptor, Prof. Nathan Smith, whom he had seen practise it successfully. He also said that Dr. Smith's explanation of the success of the method, as well as his own, accorded with that of Dr. Reid in attributing it to muscular relaxation.

In the winter of 1854–5 it was my privilege to be under the instruction of that excellent surgeon and teacher, Prof. Moses Gunn, now of Rush Medical College, Chicago.

He taught at that time *that in the several luxations of the head of the humerus*, and in the *upward* and *backward displacement of the caput femoris*, the *untorn portion of the capsule* was the main obstacle to reduction, and so far as the hip was concerned, he demonstrated his theory before his class upon a cadaver, having the articulation entirely cleared of surrounding muscles. Professor Gunn took, and ably defended the same position, in a paper published in the *Peninsular Journal of Medicine* in September, 1858, also published in the *New York Journal of Medicine*, and in a subsequent article, in which a part of the first paper was reproduced, which appeared in the *Peninsular Journal* in May, 1855.

It will be observed that while Dr. Gunn applied the same principle to the several luxations of the shoulder as to the one of the hip above mentioned, and while he differed entirely from Smith and Reid in his explanation of the remarkable ease of reduction by manipulation, putting ligamentous tension in place of muscular contraction, he yet like them confined the application of the principle, in the coxo-femoral articulation, to the *upward* and *backward* luxation; and in reply to my question whether the other dislocations of this joint might not be treated upon the same theory, he said he thought not.

These were the sources and this the extent of my knowledge upon the subject of reduction by manipulation and the claim of untorn ligament for consideration when I entered upon practice; nor have I from that time to this seen or heard anything further about the matter, outside of my own investigations, except the remarks of Prof. Busch in the Year Book of the Sydenham Society for 1863, in which he attributes the resistance in hip luxations to ligament instead of muscle. I should add, that while I have no knowledge of such fact from Prof. Gunn himself, I have been told by several students that he now extends the principle to the several coxo-femoral displacements.

I became firmly possessed with the idea that so important a principle as this had been shown to be in connection with certain luxations, must have a more general application, and within a few months after graduating I had a case of dislocation of the *caput femoris* forward and upward upon the pubis, that I reduced with my own hands without the aid of anæsthetics.

A few weeks later I saw a backward and outward luxation of the elbow in a lady 40 years old. I directed extension to be made in the line which the forearm then occupied, being the ordinary angle of flexion seen in this injury; this was done by first one, then two and finally three men pulling upon a towel attached at the wrist, while counter extension was made upon the arm just above the elbow, but without avail, the patient being meantime profoundly etherized. I now directed the assistants to cease their efforts, and seizing the arm firmly just above the elbow with my left hand, and the forearm with my right, I flexed the limb, making at the same time slight extension and rotation, and the deformity was immediately relieved. I argued with myself that if the resistance was principally or entirely muscular the powerful extension was certainly sufficient to overcome it, and that at any rate its action upon the muscles simply, was greater than the subsequent *effectual* movements of the limbs made by my own hands. Soon after this, in conversation with Dr. Daniel Towne, of Lowell, he alluded to the case of a man killed by machinery, who with other injuries sustained a dislocation of the elbow. The Doctor was called to put the mangled remains in as decent condition as possible for burial, and among other things reduced the luxation, "and," said he, "it required as much force to set those bones *as if he had been alive.*" He also assured me that he saw the body before *rigor mortis* occurred.

These several cases strengthened my suspicion that in *all forms of dislocation* ligament and not muscle was the offending agent, and in the following winter I improved an opportunity to make such observations *post mortem* upon the articulations of the elbow, wrist and phalanges as convinced me of the truths embodied in the propositions already laid down.

In considering the relative importance of ligamentous and muscular resistance to reduction the following facts should be well pondered:—

1st. The shafts of the long bones are, as a rule, surrounded by groups of muscles quite as powerful in their combined action as are those that envelope their articulations.

2d. In fractures of the shaft, with displacement of its mobile fragments whose sharp and ragged ends are constantly provoking muscular spasm, which increases its own cause, the amount of "contraction" is at least equal to that resulting from the displacement of its smooth and rounded articular extremity, which occupies a fixed position.

3d. In the various fractures (not impacted) occurring in the arm, forearm, thigh and leg, the cases are very rare in which the surgeon is not able, with his own hands, to make sufficient extension for the relief of the deformity, thus overcoming, of course, muscular contraction, even without anæsthetics, his main difficulty being to retain the fragments in proper apposition; while in dislocations, effective extension in the ordinary mode often requires the force of several men or of the compound pulleys.

4th. Profound anæsthesia annuls muscular resistance. But while it allows the fragments of a fractured bone to be replaced with the utmost facility, it oftentimes fails to diminish in any appreciable degree the difficulty of reducing dislocations, the most powerful extending force, if applied in the ordinary manner, still being required.

5th. It frequently happens that dislocations occurring in strong men, where there is no evidence of extraordinary muscular injury, are reduced with great ease by the rules laid down in the books, without anæsthetics, and when the muscles are seen and felt to be in a state of positive resistance.

It would seem that such considerations as these should long ago have taught surgeons that an opposing force so constant under the varying conditions of muscular activity and repose, and again occasionally found wanting where vigorous muscles are known to be in a state of resistance, must be ligamentous. But I apprehend that here, as in other departments of thought, progress has been hindered by that too prevalent habit of observation and reasoning by which selection is made of such evidence as seems to substantiate a theory, while facts which, viewed in the light of the theory, occupy equivocal or mysterious ground, are ignored or passed lightly by. The world is full of doctrines, both in and outside of Medicine and Surgery, that can claim only this kind of support.

Upon the theory that muscular contraction is the most powerful opposing force to reduction, a very large proportion of the difficult cases must remain unexplained. But upon the assumption that the untorn portion of the capsule is the principal agent with which we have to deal, everything becomes clear, even from a theoretical standpoint alone, the exceptional cases, as will be clearly seen, I trust, before I close, proving the rule; and when we add the positive demonstrations upon the cadaver, *stripped of its muscles*, that, excluding such cases as have already been and will hereafter be alluded to, and which are equally important as corroborating this view, untorn ligament does accurately and constantly determine the characteristic deformity of the various luxations, and that, before reduction can be effected, this *firm, dense, inelastic structure must either be torn through or relaxed;* and furthermore, that by the time-honored method of extension and counter-extension the laceration is necessarily completed before the deformity can be relieved, the proof would seem complete.

With the exception of two years, I have, since 1856, annually repeated these demonstrations in the dissecting-room, under the observation of private students and of members of the profession, and in ten successive courses of lectures have given the same illustrations more or less fully before my classes in the lecture-room.

Among many gentlemen who have kindly assisted me while pursuing these studies, I am especially indebted to my former pupils, Drs. E. B. Lyon of Palmer, Mass., F. K. Paddock of Pittsfield, Mass., Geo. E. Frothingham, Michigan University, and H. H. Kimball, Minneapolis, Minn., for valuable aid; also to Dr. H. S. Cheever, of the University of Michigan, who, while Demonstrator of Anatomy in that institution in 1867–68, very kindly afforded me extensive opportunities for experimentation. As I have already said, these observations have abundantly confirmed the truth of the propositions already laid down, and which in general terms answer the two questions under consideration. I shall now state, as briefly and concisely as possible, the points of greatest interest, both pathological and therapeutical, in relation to the several articulations, as noticed upon the subject stripped of muscles.

The Shoulder.—In this articulation the three luxations downward, forward and backward are readily produced by dividing the corresponding portions of the capsule to an extent sufficient to admit of the passage of the head of the humerus through the opening, when it is found that if the scapula and chest are covered with canvass sufficiently tense to represent the tegumentary, fascial and muscular coverings in the antero-posterior varieties, the positions that the limb assumes on the living subject in the several forms of this injury are accurately produced; and that if the limb is carried in such a direction as to relax the undivided portion of the ligament, reduction is at once effected.

The proper mode of procedure for restoring the displaced *caput humeri* may be stated in very few words. Raise the arm to a horizontal position, whatever the position of the head of the bone; then, if the head be in the axilla, make extension with a slight rotatory motion directly outward. If there is any delay in reduction carry the arm slowly upward, continuing the extension, if necessary, until it attains a perpendicular position. If the luxation be primarily forward under the clavicle, the elbow, already pointing somewhat backward, is carried still farther backward, gentle extension being made as in the first instance, until the posterior ligamentous band is so far relaxed that the bone slides into place. If the anterior position is only secondary to an axillary displacement, then as, by the movement last described, the head glides into the axilla, the limb is to be carried upward, outward and forward a little, and the reduction to be completed as in case of primary dislocation downward. If the luxation be the very rare one posteriorly upon the border or dorsal surface of the scapula, then the elbow, now pointing somewhat forward, is to be carried still further forward and upward also, for the reason that to attain this position the head of the bone has passed *downward* as well as backward, and the proper route through which the displaced bone returns to its socket is the one it travelled in leaving it.

But I have been often asked why it is, if these views are correct, that in the common dislocation into the axilla reduction is so often effected with facility by the ordinary method of extension downward, using at the same time the arm as a lever over a fulcrum of some sort placed in the axilla. The answer is easy. Without noticing at present the cases of *extraordinary* laxity of the capsule, of which I shall speak further on, it is to be remembered that the scapulo-humeral articulation is more prone to luxation than any other. With its shallow glenoid cavity, which is hardly a cavity at all, and its roomy lax capsule admitting of such a wide range of motion, the head escapes with great facility, the limb constantly assuming, within the limits of ordinary motion, positions in which the axis of the humerus points over the edge of the shallow cup in which its articulating extremity rests, when but little more force is requisite for the production of the displacement than that which will tear the ligament; and it is for the reason that the capsule is of such amplitude, and that the glenoid cavity is so small in diameter and lacks the bony ridge which so securely guards the head of the femur, that in this injury the abduction is oftentimes so slight, the arm hanging almost straight by the side; and these same conditions facilitate reduction. Yet it is true that, while as compared with other joints the amount of tension of the untorn capsule is small, requiring proportionally less relaxation, it nevertheless exists as the main opposing force, which must be annulled either by tearing or relaxation before reduction can take place. How, then, if it is not torn, is the requisite relaxation effected in the common procedure referred to? I answer, by the accommodation of the scapula to the surgeon's efforts. Were this bone immovable this method would be unavailing, unless sufficient force were used to complete the laceration of the ligament; but it is very mobile, and as the surgeon, putting his heel in the axilla, makes extension downward, the shoulder-blade guides forward upon the thorax, and as the extending force is continued, and the humerus used it may be as a lever over the axillary fulcrum, the posterior and upper border of the bone is tilted from the ribs, the glenoid cavity being turned in the opposite direction forwards and *inwards*, until by this *change of position* the tension of the ligament is so far relieved as to allow the head of the bone to return to its place. But while, for the reasons given, the old method often succeeds, it always involves *unnecessary* force, and oftentimes an amount that seriously injures the axillary vessels and nerves, and occasionally it fails altogether.

With the manipulations I have described, I believe the surgeon will never fail in a recent dislocation ; the force required is trivial, and as no injury is done to the parts, the danger of subsequent inflammation is much diminished.

The Elbow.—By dividing the posterior and lateral portions of the capsule surrounding this joint and flexing the limb, but little force is required to drive the heads of the radius and ulna into their ordinary position in the backward luxation on the living subject. It is then found that the anterior fibres of the ligament hold the forearm in the position which it ordinarily occupies in this accident. The outward and inward varieties of the backward luxation are obtained by dividing in addition the inner or outer portion of the anterior ligament, the inner to produce the outward and the outer to produce the inward form.

If the anterior and lateral ligaments are divided, leaving the posterior bands intact, after freeing the olecranon, the backward dislocation can be produced by forcibly extending the forearm upon the arm, at the same time pushing it upward. In this case the forearm, instead of being flexed more or less upon the arm, as in the common form of injury, remains extended, nor can it be flexed to any extent without completing the division of the ligament posteriorly.

In the first and common variety in which the anterior part of the capsule is untorn, reduction is effected by flexing the limb and making pressure upon the anterior surface of the forearm, near the elbow, while an assistant steadies the arm—the same indication, *i. e.* relaxation of the untorn ligament, is fulfilled by the ordinary plan of flexion over the surgeon's knee—but in the rare form of luxation in which the posterior portion of the capsule remains untorn, the forearm being extended upon the arm, and not admitting of flexion, reduction is accomplished by extending the limb still more, or if necessary, bending it a little backward, when with a little lateral or rotatory motion the deformity is readily relieved.

I have referred in another part of this paper to two cases of dislocation of the elbow, one in my own practice and another seen *post mortem* by a medical friend, both of which, and especially the latter, gave decided evidence to my mind that here, as elsewhere, we have to deal principally with untorn ligament.

I have since seen a case in the practice of the late Prof. Timothy Childs, of Pittsfield, Mass., in which the man's arm being caught in a belt, the forearm was badly lacerated, and the entire group of muscles around the humerus, except a small portion of the triceps, were torn through, exposing the bone midway between the elbow and shoulder ; the elbow joint was not exposed, but was dislocated backward and outward. At my suggestion it was undisturbed until after amputation at the shoulder, when we found that myself making the extension and Dr. Childs the counter-extension in the line which the forearm occupied, our united strength was insufficient to reduce it ; but I at once effected reduction by the manipulation I have described. An examination revealed a considerable portion of the anterior ligament untorn. Unfortunately, the prejudices of friends would not allow us to retain the specimen. Such cases need no comment.

Of the unusual condition in which the ligamentous tension is posteriorly, I have seen two cases in the living subject ; one in private practice, and one which was brought to my clinic in Michigan University, by Dr. Andrews, of Detroit, and examined with me by Prof. Armor. In both instances the limb was straight, and the malposition of the bones easily detected. In the first case I very readily rectified the displacement by bending the forearm backward a little, and making gentle extension, the patient being etherized.

In the second case the luxation had existed several weeks, and the patient declined interference.

The Wrist.—Antero-posterior dislocations of the carpus upon the bones of the forearm are produced by dividing corresponding portions of the investing ligaments, and forcing the bones into malposition. But the capsule is so lax and the articulating surface so small, that the tension is slight, and the reduction of this *exceedingly* rare displacement is effected with but little manipulation—a fact rather difficult to explain, I think, upon the old theory, when we reflect what powerful groups of muscles send their tendons below this articulation for insertion.

Metacarpo-phalangeal Articulations.—Luxations of these joints are, in a majority of cases, readily reduced by simple extension, for the reason in some cases that the capsule is entirely torn, in others that it is inordinately large, allowing of displacement without tension, so that in either the only resistance is muscular. But a minority of these cases have always been recognized as exceedingly and mysteriously difficult to manage. Every now and then a case is met with where the most powerful extending force compatible with the safety of the member is necessary, and various contrivances have been instituted for the purpose of making the extension efficient. Even then it sometimes fails. An explanation of these cases is simply impossible upon the theory of muscular resistance; but an examination of these articulations stripped of everything but the capsules reveals the fact that untorn ligament determines, here as everywhere, the deformity, and constitutes the resistance, and the simple rule is here, as in all luxations, *relax the untorn ligament.* Prof. Crosby, senior, of Dartmouth College, many years ago described a method of reduction in these difficult cases by forcibly bending the phalanx backward upon the dorsum to a right angle with the metacarpal bone, when, by pressure with the thumb or fingers, the head of the phalanx is made to slide forward into its place. This manœuvre, which is usually effectual, owes its success to the fact that it relaxes tense ligament, but that it may prove efficient it is necessary that the capsule should be torn in a certain direction, while at the same time something depends upon the original size of the ligament, and it therefore happens occasionally, as has been the case in my own and the hands of several surgeons of my acquaintance, that this procedure fails, and it fails in these rare instances because in those particular cases it does not relax the offending fibres. There is a great difference in different individuals in the size of these articulating surfaces and of the investing capsule, the capacity of the latter often being much greater than is requisite for the ordinary range of motion. Bearing this in mind, suppose a dislocation of the metacarpo-phalangeal joint of the index finger, the base of the phalanx resting on the dorsal surface of the metacarpal bone. Now it may be that in reaching this position the bone has completely lacerated the capsule. If so, simple extension will suffice for reduction. If the bone has escaped through a rent in the dorsal portion of the capsule, leaving a portion of palmar ligament intact, this will of course be upon the stretch more or less, according to its length, and it is upon its length that the success of Prof. Crosby's method depends. If the untorn palmar portion of the ligament be long enough to admit of the movement practised in this method, reduction will be accomplished. If the tense fibres are too short for this, then the manipulation will fail, unless sufficient force is used to lacerate them. It is probable that this laceration often occurs when but a small portion of the capsule remains uninjured, as the lever power applied is very considerable. In this class of cases the better manipulation, because it constantly relaxes the palmar ligament, is, *flexion* of the finger upon the palm, at the same time making extension.

Again, it may be that the capsule is so roomy as to allow the head of the phalanx to rest upon the metacarpal covered in by the dorsal ligament, with or without rupture of the anterior portion. In this case, if simple extension does not readily overcome the difficulty, Prof. Crosby's method will. And yet again, in these different conditions of the antero-posterior ligaments, certain remaining fibres of the lateral ligaments may require some modification of the manipulation to relax them.

A patient examination of a large variety of subjects will convince any one of the importance of careful attention to these several points, and of studying thoroughly, in a difficult case, the locality and extent of ligamentous rupture, and the degree of tension of the remaining portion. This may be readily ascertained by determining in which directions the finger moves, passively, most easily. The distal end will be carried most readily away from the side where the rupture exists, and with proper attention to these conditions and manipulations, in accordance with them. I believe that in recent cases subcutaneous division as so often practised by some surgeons will never be necessary, unless possibly in some peculiarly shaped and small-sized aperture, which in this joint I can hardly conceive possible.

I once saw a case with Dr. Oliver Brewster, of Pittsfield, in which he had tried extension and Crosby's method without effect, and was about to tenotomize, as he told me he had done several times in other cases, when it was found that by varying the procedure so as to relax some lateral fibres, reduction was accomplished, and he afterward told me that he believed if he had to go over the ground of the former cases again he could dispense with the knife. Whether or not the knife be occasionally indispensable, it is important to notice the fact that, when used, so far as I know, no surgeon thinks of dividing *tendon*, but finds it sufficient to divide some *ligamentous* band; thus practically, whether consciously or not, admitting the truth, for this locality at least, of the first proposition stated in this paper.

The Hip.—In the luxations of this articulation, the questions under discussion receive most emphatic answer. I have already referred to Prof. Gunn's able teachings and decisive demonstrations, with regard to the upward and backward displacements of the *caput femoris.* I have only to add that the dislocation forward upon the pubis and downward upon the thyroid foramen, and the various modifications of these, are produced with as much accuracy and fidelity as regards symptoms as are the luxations upon the *dorsum ilii*—the difference in operating being that we divide that portion of the capsule in the direction of the luxation, or in other words, opposite the point where the head of the femur is to rest. This fact is, however, to be borne in mind. With the varying capacity of the capsule in different subjects, I have often found it necessary to divide the ligament more extensively than is necessary to merely allow of the passage of the head of the bone, in order to produce these deformities in a well-marked degree, and sometimes in making the luxation downward to cut the upper part of the ligament directly opposite the opening made for the escaping caput; and in the pubic dislocation I have found a corresponding manœuvre sometimes necessary. It is not *necessary* in either instance to divide the anterior and stronger portion of the capsule. I do not, in fact, feel quite clear as to what portion of the ligament is constantly or generally torn, or I might better say how extensively it is usually torn in these luxations. That accomplished and renowned anatomist, Prof. C. L. Ford, my former teacher and present colleague, who yearly demonstrates to his classes the influence of the untorn, anterior part of the capsule in the iliac displacements, long ago called my attention to the importance of considering the great difference in strength between the anterior and other portions of the capsule; a fact noticed by the various anatomical writers. In 1864, when Dr. Lyon, of Palmer, Mass., then Demonstrator of Anatomy in Berkshire Medical College, was examining a hip joint in which I had cut away all the capsule except the anterior portion, he, after considerable effort, succeeded in throwing the head of the bone both upon pubis and thyroid foramen, producing the characteristic symptoms without injuring the anterior band.

In a compound dislocation forward examined *post mortem* by myself and the late Dr. Geo. Collins, the anterior and lower portion was untorn; as was also a band stretched above the neck, attached to the upper edge of the acetabulum. In a man who was killed by falling from a great height, and who, otherwise horridly mutilated, sustained a downward luxation, it was found by Dr. F. K. Paddock, of Pittsfield, Mass., and myself, in company with several medical men, that the inner and anterior portion was intact; also that a band ran from the posterior part of the neck to the posterior lip of the acetabulum. All these facts make me a little uncertain, without further investigation, which I hope soon to give the subject, as to the exact locality and usual extent of ligamentous injury in the several varieties of this injury. This is an important field for study. But while I feel somewhat uncertain as to the usual condition of the anterior portion of the capsule in these injuries, I am none the less certain of the application of the general principles I am endeavoring to establish.

In reduction of the iliac displacements I have used Reid's manipulation, now familiar to all surgeons, with satisfaction, and it must be admitted that it relaxes the untorn portion of the capsule; but I have found Prof. Gunn's rule equally efficient, and, as being still simpler, I prefer it—that is, *adduct the limb still further and invert still more,* when with a little extension the head returns to its socket.

I have reduced the pubic and thyroid forms of luxation, with my own hands, in accordance with the following rules:—

In the *pubic* or *upward* and *forward luxation, abduct, evert and extend the limb, carrying it backward.*

In the *dislocation downward* upon the *obturator foramen, abduct and evert the limb generally, carrying it backward.* In some cases the ligamentous tension is such that the latter movement is unnecessary, and a forward movement, with strong abduction, is better. It will be noticed that these movements, as those in the luxations upon the dorsum ilii (by which I mean the dorsal and so-called ischiatic), carry the limb to the position it must necessarily have occupied before the head of the bone could escape; and a most significant fact is, that this direction is the only one in which the limb can be carried without extraordinary, or at least unnecessary force. The intermediate forms of luxation, if I may use the term, depending upon variations of the ordinary ligamentous laceration, are to be reduced by the same general rules, varied according to the position of the limb which indicates the portion of the capsule on the stretch, *it being always borne in mind that this* determines the character of the deformity.

The Knee.—Partial dislocations of this joint are sufficiently common without ligamentous laceration, as we see oftentimes in the remarkably lax capsules of "hysterical knees"; and partial displacement may occur, the one condyle occupying the place of its fellow, with partial or complete rupture of ligament on one side. In these cases reduction is effected by extension, the leg being at the same time adducted or abducted upon the thigh—adducted if the condyles are thrown outward, and abducted if the reverse position obtains. Complete dislocations of the knee, however, are rare. Yet they do happen occasionally, and nowhere in the body do the views set forth in this paper find more forcible illustration than in these injuries. When we consider the powerful group of muscles whose tendons surround and find insertion below this joint, and the marked prominences and depressions pertaining to the articulation, it may certainly be claimed that in complete luxation of the condyles of the femur upon the tibia, the conditions for "muscular resistance" are fully present. And yet the fact has been, in my own cases and in all those of which I can find a record, that the reduction has been *remarkably easy.* I have had two cases in my own practice, and both were readily reduced with my own hands, the patients being etherized. In the first instance, so readily was replacement effected that I fully sympathized with my friend Dr. O. S. Root, of Pittsfield, Mass., who saw it with me, when he remarked that if he had thought it would "go in so easy" we would have studied the rare phenomenon a little more before attempting reduction. The second case was equally amenable to treatment. Now, how upon the old and common theory can these things be explained? If it be said that ruptured tendons might give a solution, it would be very difficult to reconcile this assumption with another remarkable feature of my own and other reported cases (and which has an important bearing upon the influence of complete laceration of capsule upon the reparative process), which is, that these cases recover with wonderful rapidity. My first case walked one quarter of a mile to my office, using only a cane, and with hardly a limp, in three weeks from the day of his injury; and this although he sustained a severe scalp wound and an amputation near the shoulder. The second case walked easily in four weeks.

But upon the ground that difficult reduction implies ligamentous tension, all becomes plain; for the articular surfaces are here expanded to such size in proportion to the laxity of their ligamentous investments, that *I have never found it possible upon the cadaver to produce a complete dislocation without entire division of the ligaments around the joint,* so that there is no untorn portion left to be put on the stretch in these accidents.

I have thus briefly and in general terms stated the results of my investigations upon this subject. Much remains to be done in detail in the critical study of the various dislocations in the light of the theory here advanced, and, I could hope, established; but while more minute knowledge shall render our work still more easy and certain, I am confident that an adoption of the general principles I have laid down will rob surgical practice of much that has been unpleasant and formidable. For myself I can say that, in a practice of fifteen years, in which it has been my lot, I think, to see a fair proportion of luxations, I have never failed, *in a recent dislocation*, with the patient etherized, to relieve the deformity without any aid except from counter-extension; and I am sure this has been from no unusual skill on my part, but simply due to the recognition of ligament instead of muscle as the agent with which I had to deal. I have been unusually fortunate in escaping those rare cases of small and peculiarly shaped rent in the capsule which, buttoning around the neck of the bone, sometimes necessarily embarrasses the surgeon. In the only case where I diagnosticated such a condition—a backward and upward dislocation of the head of the femur—I somewhat timidly and very cautiously used the femur as a lever, forcibly flexing and extending the thigh, thus endeavoring to enlarge the opening, which I apparently accomplished, as afterward the bone returned readily to its socket upon carrying the limb across the sound one, extending and inverting it. I say timidly, for I am not sure whether sometimes the neck of the femur might not yield before the capsule.

In addition to my own experience, I am happy to know that my pupils everywhere, so far as heard from, testify to the value of these doctrines as they test them in practice.

In conclusion, I desire to remind the reader that in this discussion neither is muscular resistance ignored on the one hand, nor on the other is it claimed that untorn ligament is always present, or, if so, is invariably an obstacle to reduction. On the contrary, for the muscles, it is admitted that they may operate with as much force—no more—in opposing the reduction of a dislocation as in the adjustment of a fracture, and in very rare cases, as in tetanic conditions, this may be extreme; but it is claimed that as an almost universal rule the surgeon's personal efforts are sufficient to overcome this muscular contraction, while anæsthesia practically abolishes it.

Again, it is admitted that very often the ligaments are entirely torn through, leaving nothing but muscles to encounter; and again, that the capsule in rare cases is so lax as to admit of complete displacement without tension of the untorn portion, or even without any rupture at all. This is important to remember in studying this subject upon the dead body. I have seen subjects upon which it was hardly possible to produce a complete luxation of any joint in the body without entire severance of the capsule, so short and tense were the ligaments in proportion to the unusually large articular surfaces; and again, I have found the capsule of the hip, even, so large and roomy that in one instance, much to my surprise, I was unable to demonstrate the position of the limb and the resistance of the untorn ligament in the upward and backward dislocation. In this instance, but for the teres ligament, I think spontaneous luxation would have been possible during life without rupture of the capsule at all. But it is affirmed that when the capsule is entirely destroyed or is extraordinarily loose, there is no *great* opposing force to overcome, and that the fact of easy reduction by extension in the position which the limb occupies is proof that one or the other of these conditions exists; and it is further claimed that where any great amount of resistance is present, with the exceptions already made, it is ligamentous, and that before reduction can be effected the offending fibres must either be ruptured or relaxed. The laceration can be accomplished by brute force only, while the requisite relaxation can be attained by intelligent manipulation.

Within a few days after the completion of the foregoing paper, in October last, I received the excellent and classical work on "The Hip," recently published by Prof. Henry J. Bigelow, of Boston, which I have read with pleasure and profit. It came early enough to give me the pleasant opportunity of giving him full credit for his views in a discussion upon this subject in the Cumberland County Medical Society, and I have until now hesitated whether or not to re-write some portions of my paper. But, upon consideration, I prefer to publish the article as originally prepared. I am most happy to learn, what I regret not to have known before, that this accomplished surgeon has for several years recognized and taught the doctrine of ligamentous resistance as applying to the several dislocations of this joint—I shall rejoice to learn that he extends its application to the other articulations—and he maintains that it is the anterior portion of the capsule, with its strong ilio-femoral reinforcement, which he describes as a distinct structure under the name of the Y ligament; that is, the constant factor determining the position of the limb and opposing the reduction in the various forms of luxation. I have already alluded to my indebtedness to Prof. Ford for suggestions upon this point, and to doubts that had arisen in my mind in connection with my own and Dr. Lyon's observations, and I have therefore been especially interested in this portion of Prof. Bigelow's book; but while it is undoubtedly proven that the ilio-femoral ligament may accomplish all this, I do not feel quite sure that it is so constantly the offending agent to the exclusion of other portions of the capsule, as the author maintains. If so, I do not see clearly how the pubic and thyroid dislocations were so easily reduced in my own cases by the manipulations I have described. Nor is the anterior portion of the capsule always so dense and strong. It is only yesterday that I found the ilio-femoral bands almost entirely wanting. The subject was a female, in a good state of preservation, upon which I was demonstrating the "ligamentous theory" before the class of the Portland School for Medical Instruction, and having cut away the posterior and upper portion of the capsule, I found myself able with my own strength, an assistant making counter-extension, to tear the anterior portion by simple extension. This was witnessed not only by the class, but by Drs. Foster and Weeks of this city, Bates of Yarmouth, Hall of Cumberland, and other members of the profession. This of course was an exceptional case, but, together with the reasons already given, makes me somewhat doubtful whether the "Y ligament" may not be more frequently torn than Dr. Bigelow supposes. Upon this question hinges another, as to the propriety of the general rule for flexing the thigh in all cases. But I have no disposition to discuss these points without farther observations, and can only hope that the attention of the profession will be so drawn to them that they may be speedily settled beyond question.

Upon the enlargement of the capsular opening by circumduction, Prof. B.'s experiments seem conclusive, and have given me great relief; for it seems well established that in a healthy bone the capsule will yield without danger of fracture.

January 27, 1870. W. W. G.

Selected Papers.

PREMATURE DELIVERY AS A PROPHYLACTIC RESOURCE IN MIDWIFERY.

[We select the following passages from a valuable paper in the *New York Medical Journal*, by Dr. T. Gaillard Thomas.]

The practice of inducing premature labor, unlike that of abortion, is of very recent date. Denman informs us that in the year 1756 a congress of physicians was held in London for the purpose of discussing the advantages of the procedure. It was approved of, and since that time its adoption has steadily though slowly extended.

The following list presents the morbid states for which I should consider the operation indicated :—

1. Deformity of the pelvis.
2. Placenta prævia.
3. Aggravated uræmia.
4. Excessive vomiting.
5. Placental apnœa.
6. Commencing epithelioma.
7. Death of child and consequent septicæmia.
8. Threatened death of child.
9. Approaching death of mother.
10. Amniotic dropsy.
11. Previous rupture of uterus or performance of the Cæsarean section.
12. Excessive accidental hæmorrhage.
13. Previous difficulty in deliveries of large children, or of children with ossified sutures.
14. Tumors obstructing the pelvis.

From this enumeration of indications for the induction of premature delivery, I have intentionally excluded a number which call for abortion, but not for the procedure which now engages our attention. I have likewise, for the purpose of avoiding prolixity and a spurious show of completeness, omitted the enumeration of certain rare conditions which might call for it, but would in all probability never do so. * * *

Placenta prævia.—No one who has had experience with this form of complicated labor, will feel disposed to undervalue or cast aside any remedy which is offered for the rescue of patients presenting its premonitory symptoms. So serious are its results that, although it occurs not oftener than once in five hundred cases, which is the proportion computed as correct by some authors, it exerts a marked influence upon the statistics of obstetrics. According to the calculation of Sir James Simpson, based upon the analysis of three hundred and ninety-nine cases, one-third of the mothers and over one-half of the children are supposed to have been lost. The reasons for this great mortality are probably the following :—

1. The dilatation of the cervix for the passage of the child, unavoidably exposes both mother and infant to great danger from placental detachment and hæmorrhage.

2. Repeated hæmorrhages occurring during the ninth month ; as the os internum dilates under the influence of painless uterine contractions, which then occur, the woman at the time of labor is usually exsanguinated, exhausted, and depressed both physically and mentally.

3. Profuse flooding generally occurring with the commencement of labor, the medical attendant is often not at hand, and reaches his patient only after a serious loss of blood has occurred.

Fortunately this condition is usually announced during the last months of utero-gestation by premonitory signs of a reliable character, and thus we may empty the uterus before the vital forces of both mother and child are exhausted by hæmorrhages, the results of repeated detachments of the placenta. My conviction is that, in every case of declared placenta prævia, premature delivery should be induced. What objections can be urged against it, other than that a child of less than nine months of intra-uterine life does not have as good a prospect of life as one which has arrived at full term ? In the case which we are considering, even this falls to the ground, for an eight-months child out of the uterus, and depending upon pulmonary respiration, has a brighter prospect for life than one in that cavity depending for aëration of its blood upon a crippled and bleeding placenta. For the mother, how incomparably greater the safety which attends an emptied and contracted uterus ! By inducing delivery during the ninth month of pregnancy, we should be dealing with a woman who is not exhausted by repeated hæmorrhages ; we would be in attendance at the moment of cervical dilatation, and consequently the moment of danger ; and we would be able by hydrostatic pressure to control hæmorrhage in great degree, while at the same time dilatation of the cervix, which constitutes the period of maximum danger, may be rapidly accomplished.

With these considerations before me, and with a certain amount of experience to support them, I cannot resist the conviction that, when premature delivery becomes the recognized and universal practice for placenta prævia, the statistics of Dr. Simpson will be replaced by others of a far more satisfactory kind.

I have induced premature delivery for placenta prævia four times, and, as the subject appears to me to be of paramount importance, I risk the danger of wearying my audience by detailing all the cases:—

Case I.—Mrs. W., aged 26, primipara, in good health, was suddenly taken with hæmorrhage three weeks before full term. She sent for me in great haste, but, being occupied, I was unable to go to her, and she was seen for me by my friend, Dr. Reynolds. He discovered that she had lost a few ounces of blood, but that the flow had ceased. Three days afterward she was again affected in the same way, the flow ceasing spontaneously. About a week after this, she was again taken during the night with a flow, which was so profuse as to result in partial syncope when she endeavored to walk across the room. I saw her early the next morning, found her flowing slightly, and, upon vaginal examination, succeeded in touching the edge of the placenta through the os, which was dilated to the size of a ten-cent piece. Later in the day, Drs. Metcalfe and Reynolds saw her, and agreed in the propriety of premature delivery. In accordance with this consultation, at 7 P. M. I introduced into the cervix, with considerable difficulty, and by the employment of some force, the smallest of Barnes's dilators. This in twenty minutes was followed by the next larger dilator, and in an hour by the largest. Dilatation was rapidly accomplished, but, instead of removing the largest bag, I left it in the cervix until 10 o'clock that night. Expulsive pains coming on at that time, I removed it, when the head rapidly engaged, and before morning Mrs. W. was safely delivered of a living girl. The placenta followed rapidly, and both mother and child did well.

In this case, although hæmorrhage continued slightly throughout the labor, it was never sufficiently profuse to endanger the lives of either mother or child. The implantation of the placenta being lateral, diminution of the flow occurred as the head advanced, and made firm pressure against the bleeding surface.

Case II.—Mrs. D., a lady over 40 years of age, whose last pregnancy had been completed fourteen years previously, was placed under my care by Dr. Metcalfe. She was an excessively nervous and hysterical woman, but in good health. About three weeks before full term she was taken with hæmorrhages, which lasted for very short periods, recurred at intervals of four or five days, came on without assignable cause, and ceased without remedies. The cervix was not dilated, and no physical signs of placenta prævia could be detected either by vaginal touch or auscultation. Dr. Metcalfe saw her in consultation, and, as all the rational signs of placenta prævia were present, and our patient was suffering from the repeated losses, and was becoming extremely nervous and apprehensive, we concluded to bring on premature delivery. Accordingly, at 11 A. M. I introduced a large sponge-tent into the cervix, and at 3 or 4 P. M. removed it, and succeeded in inserting Barnes's smallest dilator. At 9 that night the cervix was fully dilated at the expense of very slight hæmorrhage, and Dr. Metcalfe then being present, I removed the bag, intending to leave the case to Nature, provided no flow occurred. Previously, during the evening, upon changing the bags, I had distinctly touched the head as the presenting part, but now, to my surprise, I found that the bag impinging on this part had caused the child to revolve in the liquor amnii, and that the breech was now within the os.

We decided under these circumstances to deliver at once. The patient being put under the influence of ether, I drew down the legs and delivered a living female child. The placenta followed in fifteen minutes, and both patients did well, the child rapidly recovering from an injury to one of its legs, received during delivery.

In this case, the placenta was very nearly centrally attached. At one side of the os internum, a space of only two fingers' breadth was free. Through this, digital examinations were made, and the hand pushed to seize the feet. The first stage being accomplished by means of the hydrostatic dilators, no hæmorrhage attended it; but, without this means having been employed, it is highly probable that profuse and dangerous flooding would have occurred.

Case III.—Mrs. P., a multipara, aged 38, had advanced, without any unfavorable symptoms, to the middle of the ninth month of pregnancy. At this period, while sitting, at 9 P. M., in her parlor, engaged in some light needle-work and in conversation, she suddenly felt a free flow of blood pouring away from the vagina. In a few moments she became very much exhausted, and was lifted up by her husband and carried upstairs to bed. I saw her within an hour after this, and found her still losing blood to a slight extent. Her pulse was very rapid and weak, and her face extremely pallid. It was estimated that about one quart of blood had passed, though this was of course uncertain.

As the flow had ceased after I had kept the patient quiet for an hour, I left the house, promising an early visit in the morning. Upon this visit I found her doing well, though somewhat exhausted. Feeling satisfied, from the great amount of flow, and the fact of its having occurred without any exciting cause, that placenta prævia existed, I now explained the state of affairs to my patient's husband, and requested Dr. Metcalfe to see her in consultation. He agreed with me that the probability of the safety of both mother and child would be greatly increased by at once inducing premature delivery, and at 9 that night I set about accomplishing it. At 9.30 exactly, in the presence of Dr. Metcalfe, I introduced into the cervix the smallest size of Barnes's dilators, and at 10.30 the os was fully dilated. So long as the bag was retained in the cervix, no hæmorrhage occurred, but on the instant of its removal a flow took place. Under these circumstances it was thought best to deliver at once. The patient being put under the influence of chloroform, I performed bimanual version, and with great ease delivered a living child. The placenta soon followed, and mother and child recovered without an unfavorable symptom.

In this case, delivery was accomplished in one and a half hours from the commencement of the effort, and the process was inaugurated just twenty-four hours after the development of the first symptom of danger. The flow which constituted this symptom was so sudden and alarming that we thought that great danger would attend delay, uncompensated for by any corresponding advantage. After full dilatation and removal of the dilator, Dr. Metcalfe examined and found a very large piece of placenta hanging out of the os uteri, and thus the diagnosis was proved to have been correct.

Case IV.—I was called on the 14th of November, by Dr. Keeney, to see with him Mrs. R., a multipara, aged 23 years, who was nearly at the end of the seventh month of pregnancy. About one week before our visit she had been suddenly seized with quite a profuse hæmorrhage, which had rapidly diminished, but never completely disappeared. The nature of the flow, which occurred by sudden gushes, and in great profusion, led us to the conclusion that it was due to placenta prævia, but as the period was not favorable to the viability of the child, we determined to avoid interference until the eighth month, if possible. The patient was accordingly kept perfectly quiet in bed, and all effort avoided. For two and a half weeks this plan appeared to succeed, and we had strong hopes of reaching a period when both child and mother might be rescued by premature delivery. When the seventh month and one week of the eighth had passed, the flow returned, and continued so steadily that, to our regret, we were forced to empty the uterus in the interest of the child, who was evidently becoming much enfeebled by gradual placental detachment, and of the mother, who likewise felt the loss of blood very perceptibly.

At this period Dr. Keeney and I met at the patient's house at 8.30 P. M. At twenty minutes before 9 I introduced Barnes's smallest dilator. At ten minutes after 9 the os was fully dilated, and I, introducing my hand, readily delivered a living child by version. The child was evidently very feeble, and, although at once wrapped in cotton and surrounded by an atmosphere heated to 95°, it lived only about nine or ten hours.

In this case, as soon as the os was fully dilated, we could distinctly feel the placenta, and as I passed up my hand I found that it was centrally attached. It is the only case in which I have met with complete placenta prævia. The mother recovered without an unfavorable symptom. * *

Influenza.—The West-end of London has been visited with severe influenza during the last fortnight. It usually begins quite suddenly with pain in the throat and ears, followed by shivering, *malaise*, constriction of the chest, sneezing, and utter prostration. The temperature goes up to 102° the first night, and there is some tendency to lightheadedness. Bed, lemonade, and beef-tea, with an aperient pill and ammonia draught, the first day; next morning a five-grain dose of quinine, and half a pint of champagne at night, form the best way of dealing with this unpleasant visitor—*tuto, cito, et jucunde.*—*Med. Times & Gazette.*

Reports of Medical Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

CHARLES D. HOMANS, M.D., SECRETARY.

Jan. 10th, 1870.—*Lupus treated by Galvano-Caustic.*—Dr. White showed a section of lupus under the microscope, and also a patient who had the disease, and had been galvano-cauterized. The following is the account of the case.

"Mr. L., aged 38 years, is paralytic; constitution broken down; one year ago, disease appeared on top of left shoulder as a reddish lump, which in a month broke down at one point, and since then the ulceration has been spreading towards the circumference, healing in the centre.

Nov. 11th, he was treated by cautery, with the nitrate of silver, and this was repeated three times, but the tissues surrounding the parts cauterized broke down, the man having poor food and bad hygienic surroundings.

Dec. 22d, the galvano-caustic was applied, and again Jan. 1st, each time with great benefit, healthy granulations rapidly filling up the parts destroyed by ulceration.

Dr. White had treated two other cases in a similar way, as follows. Barbara W., aged 20 years; the disease began at 3 years of age on her face, destroying one eye eleven years ago, and soon after the nose; five years ago it appeared on the buttock. Now, prominence of nose entirely absent; mouth reduced to a slit of half an inch in length, bounded by firm cicatricial tissue; skin of face generally changed into superficial scar tissue; some fresh ulceration about the mouth; left buttock occupied by an encrusted border of serpiginous herpes, forming a complete circle eight inches in diameter. Nitrate of silver was applied several times, the stick being, in some places, pushed to the extent of an inch into the boggy tissues. Subsequently, the galvano-caustic was used twice, causing healthy granulations and rapid healing, while the part in which the use of the nitrate was continued made slow progress. Now, is completely healed."

"R. C. H., 27 years old. Disease first appeared on the hip five or six years ago, and two or three years ago on the scalp.

August, the forehead and scalp, largely occupied by the disease, were covered with crusts, beneath which the integument was easily ploughed up by a stick of nitrate of silver; beyond the limit of surface, disease in all directions; over the right trochanter was a patch of the disease three inches in diameter. All these parts were touched repeatedly and thoroughly with the solid nitrate for two months, at intervals of a week, but they healed very slowly.

Oct. 21st, galvano-caustic was applied, and three or four times subsequently, at intervals of three days, to all the affected parts. Healthy granulations began to form after the second cauterization, and on Nov. 6th the disease was wholly subdued. Acute desquamative nephritis, with universal anasarca, suddenly appeared, although the health had been good previously, which lasted two weeks."

Dr. White said patients think the subsequent pain much less and of shorter duration than when lunar caustic is used; its action can be limited, though more active than nitr. arg. He described the battery and the mode of using it, and spoke of its advantages. To Dr. Lyman, he said that in superficial lupus the acid nitr. of mercury was sometimes better than arg. nitr., but not so good if the disease extends deep.

Dr. Hodges said the quickness with which a galvanic cautery was got ready for action made its use very advantageous in surgery. Since the Massachusetts General Hospital had possessed this apparatus it had been in frequent requisition. He had himself used it in a variety of cases, and was much pleased with its efficacy and convenience. The uniform degree of heat, which persists so long as the battery works, permits the application of the actual cautery in many instances where it would be impossible if a charcoal furnace, spirit lamp, or Brunsen's burner were depended on. The wire can be inserted into a hæmorrhoid or nævus, for example, and kept there cauterizing as long as is desirable; one otherwise heated loses its caloric so quickly on contact with the tissues that its action is but slight. By means of the galvanic cautery, Dr. Hodges had treated and cured, with a minimum of deformity, a nævus which involved the gum and entire thickness of the upper lip and cheek, as well as the ala and tip of the nose. The disease was so extensive and irregular in shape that it would be difficult to have conceived its treatment possible by ligature, excision, or any mode of cauterization other than that which was adopted. Four sittings, at intervals of about three weeks, were required.

Jan. 10th.—*Necrosis of Radius; Hæmorrhage; Amputation.*—Dr. Lyman reported the case.

The patient, aged 55, had an acute attack of osteitis in February, 1868, without known cause. He was first seen by Dr. Lyman in May, 1868, at which time free openings were made over the radius and carpus to evacuate collections of pus, and some pieces removed from the latter. Firm anchylosis of the carpus with the adjoining bones ensued, and entire loss of movement in the hand and fingers.

October, 1869, the sequestrum from the radius began to loosen, and it was proposed soon to attempt its removal. The patient returned to his home, some distance in the country, and, Dec. 17th, profuse sudden hæmorrhage occurred, and again on the 18th, reducing him very much. He was seen by Dr. Lyman on the following day. As the origin of the hæmorrhage was uncertain, the whole forearm being infiltrated and œdematous, and as the usefulness of the hand was already destroyed irrecoverably, it was decided, in consultation with Dr. Cheever, that amputation was preferable to ligature of the brachial. This was done, by Dr. Lyman, Dec. 20th. On examination, it was found that a sharp spiculum from the sequestrum, projecting from the lower third of the bone, had divided the radial artery. Hæmorrhage from such a cause in necrosis must be a very rare accident.

Jan. 24th.—*Recent Views of Tubercle.*—Dr. Ellis, in reference to Dr. Jackson's paper, read at the last meeting, said Niemeyer is obscure; he does not say what tubercle is, probably taking it for granted that the modern definition is sufficiently well known; he does not make a distinction between well-established facts and theories founded on ideas. In croupal, catarrhal pneumonia and tubercle he describes what cannot be seen without a proper preparation of the product for the microscope; by means of this instrument the vast majority of caseous masses are shown to be something else than tubercle, and are found in cancer and various other cases.

Gelatiniform material is very rarely seen in connection with what has been called "infiltrated tubercle," now "chronic pneumonia." The statement that pneumonia affects only the substance of the lungs is not correct. To deny inherited tendency to tubercle is not correct; certain persons do inherit a tendency to degeneration of the lungs. The older writers spoke of the inflammatory origin of tubercle, but their ideas were based on theory, the present ones on facts derived from microscopic observation; formations formerly called tubercular are now well recognized as products of inflammation.

To Dr. Bethune, Dr. Ellis said tubercle in the fresh state and the pneumonic product would to the naked eye be very different—the one translucent, the other opaque; but when degenerated they could not easily be distinguished.

Dr. Jackson repeated what he had said in his communication to the Society, that tubercle, as heretofore understood, and in all its forms, is, he believes, allied to inflammation, but it is only an alliance; and he again drew a parallel between Niemeyer's croupal and catarrhal pneumonia, and showed how widely they differed from each other in their gross character and in their tendencies. He referred to his "acute miliary tuberculosis," in which the lungs are crowded with small granulations from apex to base, as seen often in tubercular meningitis, and in cases that have passed during life for typhoid fever; and he asked Dr. Ellis if he had ever seen this form of disease as a complication in an ordinary case of phthisis?

Dr. Ellis answered that he had seen miliary granulations in the so-called cases of common phthisis, and that Niemeyer as well as others who insist upon the pneumonic character of the latter, state that miliary granulations generally make their appearance during the course or towards the close of this common disease. These translucent, widely disseminated granulations are true tubercle, and are quite rare as a distinct disease when compared with that usually called phthisis.

Jan. 24th.—*Erectile Tumor following a Blow; Operation; Secondary Hæmorrhage; Death.*—Dr. Cabot reported the case.

J. H., farmer, aged 53, entered Massachusetts General Hospital Nov. 12th, 1869, with a tumor the size of a small orange, just above inner malleolus of left foot. Tumor had a hard base. The upper part was elastic. It had existed little more than a year, coming on after a blow from a crowbar. Had been told by his country surgeons that he must lose the foot.

Operation on the 13th.—An incision about three inches in length was made over the tumor. The upper part of it was a sac filled with blood. The hard base was a sort of erectile tissue, resembling organized blood clot. Sutures were passed through the flaps but not tied—a sponge placed over the wound and snugly bandaged, to check the oozing, which was quite free. The stitches were tied in the afternoon, and compression continued.

On the second day after the operation a little slough appeared in the centre of the flap; stitches were removed, and yeast poultice applied.

On the third day a suspicious redness about the wound.

On the fifth day well-marked erysipelas over foot and ankle; wound quite sloughy; line of lymphatics running up the leg; a vein divided by slough; bled quite freely at morning dressing.

On the 19th, the sixth day after the operation, bled again quite freely; fluctuation over ankle, and on dorsum of foot. He was etherized, and incisions made, which bled quite freely. The original wound and incisions were touched with ferri perchlor., stuffed with dry lint and firmly bandaged.

On the 27th (fourteenth day after operation) had a well-marked rigor; foot discharging freely; delirium well-marked.

Chills continued at intervals until the 30th; he was ordered two-thirds of a minim of a saturated solution of carbolic acid ter die, which was gradually increased to ℳj. of the solution four times a day. Marked improvement followed, chills ceased almost entirely, the delirium disappeared, and appetite returned.

On the 4th of December the bleeding from the foot returned, and continued at intervals until his death.

On the 8th he complained of severe pain in left chest.

On the 9th (the twenty-fifth day after the operation) the foot bled quite freely; he was etherized, and the incision over ankle enlarged; the foot was found to be generally undermined; the tibia was denuded and apparently perforated. Amputation was declined; the wounds were stuffed with sponges soaked in tinct. ferri perchlor. The patient became quite pulseless during the operation. Stimulants were given freely during the afternoon, but he died about 10, P. M.

An autopsy by Dr. John Homans showed a circumscribed pleurisy of left side. No other lesion.

Jan. 24th.—*Puerperal Convulsions at the Seventh Month; Successful Induction of Premature Labor.*—Dr. Sinclair reported the case, to which he was called in consultation.

A primipara, 23 years old, had convulsions somewhat alleviated by the inhalation of chloroform, but still continuing when first seen by Dr. S., ten or twelve hours after the convulsions began. The os uteri would not admit the index finger, and the entrance of the vagina was rigid; the urine had been found to be albuminous, and there had been none at all for the twenty-four hours before the onset of the convulsions. Labor was brought about under chloroform, by gradually dilating the os by introducing one finger after another, till the hand could be passed in. Dr. S. was struck by the clearness with which the inner os could be made out, and the distance between it and the outer os. Dilatation occupied one hour and a half; the membranes were ruptured by the hand in the uterus; the head presented, but a foot was found, the child turned and born alive; ergot was given just before the exit and good contraction followed. The only uterine contraction before the birth was on the hand in the womb, requiring deep chloroformization to overcome it. The mother had a few convulsions after her confinement, but has since done well.

In these cases it seems necessary that dilatation should be done very gradually, and in the course of fifteen or twenty minutes the parts seem to give way all at once.

Dr. Lyman said Dr. Sinclair's statement as to the condition of the os was interesting in connection with the opinion of Cazeaux that the internal os does not disappear till the last month of pregnancy, the external os and neck becoming very soft before, and giving the impression to the examiner that they have disappeared.

Dr. Parks said first rate observers differ in this regard; some writers say the cervix becomes so soft as to yield to the finger and give an impression that it has shortened, when this is not the fact; others think the uterine neck gradually shortens throughout pregnancy.

* * *

Anosmia.—Dr. Ogle, in his paper on "Anosmia," at the Royal Medical and Chirurgical Society, on Jan. 25th, observed that anosmia is frequently the accompaniment of aphasia, and argued that this was because of the proximity of the so-called external root of the olfactory nerve to the part of the brain usually affected in aphasia. Dr. Webster said anosmia evidently depended on injuries, &c., to the brain, and Mr. Gascoyen mentioned two cases where the soft palate adhered to the pharynx, and both patients were without the sense of smell; and another where a patient lost the bones of her nose, and now had neither taste nor smell.—*Dublin Med. Press and Circular.*

Medical and Surgical Journal.

Boston: Thursday, March 3, 1870.

A BILL TO REPEAL THE CHARTER OF THE MED. SOCIETY OF THE DIST. OF COLUMBIA.

We have received a copy of the *National Republican* newspaper for February 12th, containing the report of the Congressional Committee on the District of Columbia, upon the order of the Senate to consider the expediency of repealing the charter of the Medical Society of the District; also a copy of the *National Republican* for February 17th, containing strictures on the said report. The memorials of the Medical Society of the District of Columbia and of the National Medical Society of the District of Columbia, printed in our issue of February 17th, have placed the leading points of the two contending parties before our readers, who have a right to be informed upon the question in dispute, inasmuch as the District of Columbia is, in a special sense, national domain. We propose to extract from the report of the committee, whose chairman is one of the Senators from this State—Mr. Sumner—such additional facts as threw further light on the question under discussion, keeping our political sympathies as much as possible in abeyance, since a medical journal is no place for their display. In order, however, that the reader may make due allowance for any bias which may rest on our mind, we deem it but fair to state our position at the outset, although it may suit the views of no one but the writer. We hold that the time is past for political or civil disabilities, on the ground of color or race; but that questions of social juxtaposition should be allowed to work themselves out on the basis of Christian brotherhood.

The chartered body is the "Medical Society of the District of Columbia." "It has," say the Committee of Congress, "power to hold property, which according to the tenor of this act, is to be applied 'to such purposes as they may adjudge most conducive to the promoting and disseminating medical and surgical knowledge, and for no other purpose whatever.' Such was the declared object of the society. Its object was science, and no other purpose whatever."

Among other provisions occurs the following:—

"That it shall be lawful for the said medical society, or any number of them attending, not less than seven, to elect by ballot five persons, residents of the District of Columbia, whose duty it shall be to grant licenses to such medical and chirurgical gentlemen as they may, upon a full examination, judge qualified to practise the medical and chirurgical arts, or as may produce a diploma from some respectable medical college or society, each person so obtaining a certificate to pay a sum not exceeding ten dollars, to be fixed or provided by the society."

Certain colored physicians offered themselves for examination under this regulation, passed and were *licensed to practise* medicine in the District.

The Committee go on to say:—

"Besides this charter is what is entitled a 'constitution,' adopted by the society, where will be found further details, expressed in articles.

"By one of these it is declared in substantial harmony with the charter, as follows:—

"'The object of this society shall be the granting of licenses agreeably to the provisions of the charter, and the consideration and promotion of all subjects connected with medicine, and the collateral branches of the science.'

"Thus again is the society dedicated to medical science, and constituted an educational institution.

"By another article it is declared:—

"'Candidates for membership shall be duly proposed to the Medical Society, and be recommended by the board of examiners, and may be balloted for at the meeting next after their proposal, when it shall require the concurrence of two-thirds of the members present for their admission, and every member so elected shall have previously paid to the treasurer of the society an admission fee of ten dollars.'"

The colored physicians, now licentiates, were balloted for as members of the Society, were rejected, and were thus excluded from all share in the Society's "consideration and promotion of all subjects connected with medicine," &c. But, it would appear that such consideration and promotion is a dead letter, so far as this chartered

"Society" is concerned. Here, then, comes into play a wheel within a wheel. The medical practitioners of the District many years ago organized a voluntary Society, known as the Medical *Association* of the District of Columbia, its members apparently being the same as those of the previously-mentioned body corporate designated as the Medical *Society* of the District of Columbia. The Committee put it in this way :—

"By a supplementary process of metamorphosis, the 'medical society' changes itself into what is called a 'medical association,' with the same officers, but subject to a series of 'regulations' through which certain restrictions are established, plainly inconsistent with the charter, which is the origin at once of the society and of the association. By these 'regulations' the members of the association are 'members or licentiates of the medical society,' who, 'having produced satisfactory evidence of qualification,' receive on ballots the vote of a majority of the members present, and, on election, subscribe the 'regulations' of the association.

"Thus is membership of the association twice guarded: First, the candidate must be a member or licentiate of the 'society;' secondly, being such, he must besides be chosen by a majority of the 'association.'"

The writer of the newspaper article, criticizing the Committee's report, says the above statement is incorrect, in so far that the officers of the "Society" are not the same with those of the "association." Say the committee :—

"Among the 'regulations' of the 'association' are two, deserving special attention from their inconsistency with the original charter. The first is the tariff of fees, when the charter expressly declares that 'nothing herein contained shall authorize said corporation in any wise * * * to establish or fix a tariff of charges or fees, or to interfere in any way with charges or fees for medical attendance.' The second is the notable article that 'no member of this association shall consult with or meet in a professional way any resident practitioner of this District, who is not a member thereof, after said practitioner shall have resided six months in said District,' and this in the face of the charter, which declares, first, that 'nothing herein contained shall authorize said corporation in anywise to regulate the practice of medical or chirurgical attendance;' and secondly, that 'the by-laws, rules and regulations shall in their application and operation be exclusively confined to said society as a society or body corporate, and not to its members individually, when not acting in a corporate character.' Obviously, on the face, these 'regulations' are inconsistent with the charter of the 'society,' out of which the 'association' is derived. The attempt through this supplementary 'association' to accomplish what is forbidden to the 'society' is a plain evasion, which is a characteristic cover for the unworthy incidents which have occurred.

"By the act of Congress to which both society and association are traced there is no sanction for any exclusion on account of color, and all by-laws and regulations of fees or attendance are forbidden."

Whatever may be the exact relation of the voluntary "association" to the chartered "society," between the two the action of the members composing them seems to have brought about the situation set forth by the following facts adduced by the Congressional committee.

"Dr. Augusta, formerly an army surgeon and brevet lieutenant colonel, states that members of the medical society have repeatedly refused to consult with him, alleging as a reason that the laws of the society prohibited them from doing so. He then relates that in June, 1868, while in attendance upon a patient, the family desired that Dr. Garnett should be summoned. The messenger who went for him reported that he was out of town, but that Dr. Drinkard, who was in charge of his practice, said that he could not consult with Dr. Augusta, as the latter 'did not belong to his society,' but that he would take the case, which proposition was declined by the family, and Dr. Bliss, well known for his liberal nature, was called in, who consulted with Dr. Augusta, the society to the contrary notwithstanding. Dr. Augusta adds :—Dr. Garnett 'has taken two of my patients while I was attending them, and without any notice to me, except that at my next visit I was informed that Dr. Garnett was attending.' Another practitioner said of Dr. Augusta that he believed the latter was a good doctor, and he would have no objection to consult with him, but the rules of his society did not allow it. On this Dr. Augusta properly remarks :—

"'Now you will see that all three of these gentlemen refused to consult with me, on the ground that I was not a member of their society, while at the same time, when I have taken steps to become a member, they, with others, use extraordinary means to defeat my election and succeed in their object.'

"Dr. Purvis, one of the proscribed on account of color, relates an experience similar to that of Dr. Augusta. He was called suddenly to a patient, when, owing to the fright from sudden illness, messengers were sent to Drs. Lovejoy, Miller, and Norris. 'The patient,' he says, 'properly belonged to me; but when I ascertained that other physicians had been sent for, I waited to hold consultation with them. They arrived in a little while, but, to my surprise, excepting Dr. Norris, they would have nothing whatever to do with me.' And he then adds:—'It is not an uncommon experience of mine to have physicians take my patients, they knowing I had not been dismissed, thus doing me direct injury.' This testimony is in entire harmony with that of Dr. Augusta.

"Dr. Tucker, another of the proscribed on account of color, after testifying to the refusal 'to meet in consultation, thus subjecting physicians of color to great disabilities,' proceeds to mention three instances where members of the society had declined to go into consultation with him, one of them saying that 'it would be impossible to call in consultation, as the association would impose a fine upon him for so doing.'

"Such is the evidence before the committee, leaving no question of the damage done to these colored practitioners. But it must not be understood that all the members of the society follow the proscriptive rule. Some depart from it clandestinely—others openly. Some bravely challenge the censure of the society, while they perform simple professional duty.

"There is a further loss of educational opportunities produced by this proscription. If such opportunities are of value; if they are not entirely useless, then should they be extended generously to all practitioners who come within the condition of fitness. An exclusion on account of color is a limitation of medical education, which is the more unjust when it is considered how large a portion of the population here belongs to the proscribed race. In this aspect the conduct of the medical society is open to additional reprobation.

"From what has appeared before the committee, three things are in evidence:—

"1. That medical practitioners, above criticism in every respect, are refused admission to the society solely on account of color.

"2. That members of the society refuse to consult with medical practitioners, thus excluded on account of color to the serious detriment of such practitioners.

"3. That medical practitioners are now shut out from educational opportunities on account of color."

It strikes us that the allegation on the part of the "association" that its meetings were for social reunion, is hardly a sufficient excuse for the *disabilities* in the matters of consultation and medical improvement inflicted on the colored licentiates of the present "society." The committee tell us that they delayed action in order to give recalcitrant gentlemen time to alter their regulations; and we think we are keeping within bounds when we express the opinion that the rules or by-laws of the "association" might have been suspended to the extent of allowing consultations with the colored Doctors, so long as the latter should comport themselves like true physicians. Furthermore, in a profession so cosmopolitan as medicine, we hardly see how participation in the benefits of scientific discussion could have been consistently denied the licensed practitioners in question.

In following out this analysis, we have derived the impression that those composing the majority of the incorporate "society," and also the majority of the voluntary "association," have pursued a Bourbon policy, which is likely to prove disastrous to both organizations.

"The committee, for the present, content themselves with reporting a bill to repeal the original charter, which, according to its terms, Congress may 'at any time alter, amend or annul at pleasure.'" * * *

INSUBORDINATION OF THE NAVAL STAFF.—In view of the comparative uncertainty attending the question of naval discipline, especially as concerns the relative position of the medical staff, it will be gratifying to our readers to learn that at last a fixed point of departure for all future arguments has been established, and that the *deus ex machina* to whom all allegiance is due, and from whom all power and authority emanate, has deigned to display himself to the admiring gaze of subordinate mortals. It appears that even the supreme dignity of the Practical Business Man has its ascending grades, and that the very essence and sublimation thereof centres in the person of a Mr. George W. Blunt, to whom the Secretary of the Navy and the awful potentates of "The Line" bear the relation of titular vicars; to whom is due the fealty of men in general, and of medical men in particular, and upon whose permissive fiat all congressional action must depend.

In reply to the mercantile memorial against conferring rank upon the naval staff, to which we called attention in our issue of the 8th inst., certain gentlemen representing the interests of the staff, addressed to the signers of that enlightened document, and among them to Mr. Blunt, the following courteous letter:—

"DEC. 22.—To George W. Blunt, Esq., New York: Sir,—The above memorial, signed, under the date of November 15th, 1869, by yourself and fifty-three other distinguished and influential citizens of New York, has been presented to the Congress of the United States. Your signature, and that of the other gentlemen associated with you, must have been given under great misapprehension of the facts, which are, that in every plan and scheme of staff rank which we have ever presented, the superior rank and authority of commanding officers have been carefully protected, as essential to that discipline which is as much desired by staff officers as by the other half of the navy—facts well known to every officer in the service and to the Naval Committees of Congress.

"We make this correction in the confidence that you will deem it proper, either to withdraw your name from the memorial, or to inform us on whose authority you have made the statements contained in it, which are so injurious to us, and to which you have, under obvious misapprehension, given the sanction of your honorable name.

"We are, respectfully, your obedient servants, Surgeon GEO. CLYMER,
And other Staff Officers of the Navy.

To this letter was made a rejoinder which, if it were to be judged by the rules governing correspondence between ordinary gentlemen, might seem rude and pretentious, but which, coming from a person of so much importance, and addressed to such inferior beings as naval surgeons, is, of course, not amenable to the usual standard of criticism. The Italics in the subjoined copy are ours:—

NEW YORK, Jan. 12.—Gentlemen,—I have received your circular, with the memorial addressed to Congress, in relation to the bill before that body as to the rank of the staff of the navy, in which you ask me to withdraw my name, or give up that of the author of the document. Denying your right to make such a demand upon me as an infringement of my liberty of free action, I will say that I took a part in getting it up on information from one of the officers of the navy of the highest personal and professional standing; that I believed in the necessity of the memorial then, and do now. Had any doubt existed in my mind as to the propriety of my action, it would have been dispelled on the receipt of your memorial, as in my view the *sentiments of insubordination* conveyed in the demand made on the signers of the memorial, show the necessity of great caution on the part of Congress in legislating on this subject.

"Respectfully yours,

GEO. W. BLUNT."

"Surgeon Geo. Clymer and others, U.S.N."

We regret to add that this ultimatum was not received with that reverential humility to which it was entitled, but that the recipient thereof carried presumptuousness to the point of inditing a response, which we append with tremulous consciousness of its enormity:—

"WASHINGTON, D. C., Jan. 15.—Sir,—In answer to your note of the 12th inst., acknowledging the receipt of a circular, dated the 22d ult., signed by myself and many other staff officers of the navy, I have to remind you that our circular was a reply to a memorial to Congress, hostile to the interests of the Naval Staff Corps, bearing the names of yourself and other influential citizens of New York, and containing serious errors of statement in relation to us.

"Presuming these erroneous statements to have been made under misapprehension, we referred, in disproof of them, to the records of all the plans of rank ever proposed by the staff officers, as known throughout the service, and to the Committees of Congress, before whom the plans had been laid.

"In making these references, we supposed that we were doing a kindness for those who had been led into error, by giving them the information which would enable them to correct and acknowledge it.

"In this light the circular appears to have been regarded by all from whom we have received replies, except yourself; and you characterize our correction of your errors as insubordinate.

"The circular was courteous, and could

have been in no way insubordinate, as we owed you no submission.

"The fact that you avow yourself as partially the author of the memorial, and decline to name any better informed authority for its misstatements, does not alter its nature; and we are willing to leave you with the responsibility you have assumed.

"It is due to our cause, and to truth, that we publish your discourteous note, with this reply, in connection with the correction we have already made of the misstatements for which you assume responsibility. Respectfully, GEO. CLYMER,
Surgeon U. S. Navy,
for himself and for such of his associates as he has had the opportunity to consult."

"To GEO. W. BLUNT, Esq., New York."

If, as is thus decided on the highest authority, those members of our profession who, in addition to their scientific degrees, hold commissions as officers in the navy, should manifest silent subordination to the decrees of Mr. Blunt, who lives at ease ashore, it is evident, *a fortiori*, that we mere medical land-lubbers must owe to him still more abject submission; and we therefore hasten to acknowledge our subordination, of which were previously unaware, and impress upon our professional readers a solemn sense of their duty under this new order of things.—*New York Med. Gazette*, Jan. 29.

THE WELSH FASTING GIRL.—The drama of the Welsh fasting girl, which was regarded in the first instance by all reasonable persons as a farce, has ended tragically. Four nurses from Guy's Hospital who were sent to watch her, said that she literally fasted for eight days, at the end of which time she died. The watching began on December 9th, and was terminated by the death of the girl at 3 P. M., on December 17th. On December 11th she is reported to have been not looking so well, but up to the 14th she is said to have amused herself with reading and to have appeared cheerful. She slept at intervals; her cheeks appeared flushed. On December 11th the nurses observed stains of excrement on the girl's dress. On the 13th she is reported to have passed a large quantity of urine, and on the 14th and 15th a smaller quantity. For three days before her death her extremities were cold, and during the last two days she was restless, throwing off the bed clothes, and tossing her arms about. She asked for no food, and made no confession of deceit. No attempt was made to force food upon her, but it seems she was offered it by her uncle on the day of her death. "She made no reply, but appeared to go off into a fit." On the same day, when the child was sinking, her father refused to allow Mr. Davies, the Surgeon who attended her, to give her food, but afterwards said that he might do so. Mr. Davies did not, however, "as it was too late." An inquiry is being held by the local coroner, and a *post-mortem* examination has been made by Messrs. Thomas and Phillips. At the time of our going to press the inquest is proceeding, but we extract the following report of Mr. Thomas's evidence given at the first day's sitting from the *Western Mail* of December 22d :—

"Mr. James Thomas, Surgeon, Newcastle-Emlyn, was the next witness, and said: On Monday, in conjunction with Mr. Phillips, in the presence of Dr. Lewis and other gentlemen, I examined the body of Sarah Jacobs, said to be about 12 years and 6 months of age. It measured about 54 inches, was plump and well formed, and showed indications of puberty. I opened the head and found the membranes of the brain considerably injected with blood, which in all probability happened a few hours before death. The substance was not very vascular, but perfectly healthy and of proper consistence, and there was not the slightest difference between the sides of the brain. An incision was then made from the top of the chest down to the lower part of the body, which displayed a fine layer of fat, from half an inch to an inch thick, there being fat all through the incision. The chest—lungs, heart, and great vessels—were perfectly sound and healthy, containing very little blood. I then came to the most important part of the inquiry—that of the alimentary canal, and my first observation was that there was not the slightest obstruction from the mouth to the termination of the gut, which included about 33 feet. The stomach was opened, and it contained about three teaspoonfuls of semi-gelatinous fluid, as if it had been mixed with a little bile, having a slight acid reaction with litmus paper. The whole of the small and large intestines were then laid open, and the small ones were empty, but in the colon and rectum there was about half a pound of excrement in a hard state (which was produced for the jury to examine, if necessary); the liver was healthy, with the gall-bladder considerably distended with bile, the kidneys and spleen perfectly sound, and the urinary bladder perfectly healthy—in fact, as far as eyes could see, no malformation or disease, judging from the healthy appearance of the organs. My theory is that death resulted from want of nutriment and sustenance."

It would be a departure from custom to comment at length on this case until the public inquiry has terminated. All we can say at present is that it is impossible not to regard it with indignation. The poor hysterical child who is dead was not the chief person to blame. The facts of her having breathed for two years and passed urine prove undeniably that she must have taken food. That she denied the fact is only a common symptom of hysterical disease, and that she found persons in her father's house to humor her and assist her in the deceit is not surprising when it is remembered that she attracted sightseers who paid or made her presents. Those who are most to blame are the educated gentry and Professional persons in the neighborhood, who, instead of scouting the idea of anything but hysteria and fraud in the case, lent their aid, by talking and writing in a half-credulous fashion, in spreading the girl's reputation as a living wonder. If a physician had in the first instance told the parents that simulating fasting was a well-known phase of hysteria, and that the proper treatment was to introduce a tube into the stomach or rectum, and to feed her thereby, and had insisted on seeing his prescription carried into effect, or, in case of opposition, had appealed for power to a magistrate, the poor girl's life might have been saved. Instead of this we have had silly people kept on the *qui vive* for two years by sensational paragraphs in Medical and other papers—then "a committee formed to investigate the case," and nurses sent down from a London Hospital to watch her, with what result has been seen. The whole thing is as great a national disgrace as it would be to try a woman for witchcraft by the ordeal of drowning.—*Medical Times and Gazette.*

SUCCESSFUL EXTIRPATION OF ONE KIDNEY. —Mr. Spencer Wells, in a letter to the *London Medical Times and Gazette*, says:—

I have just received a letter from Prof. Wagner, of Königsberg (so well known here by Mr. Holmes's excellent translation of his work on the healing process after the resection of bones and joints, published by the New Sydenham Society), and I think the following extract will be read with great interest:—

"As I passed through Heidelberg, I saw a patient of Simon's whose case will interest you extremely. A provincial Surgeon had performed ovariotomy for her; and, on account of inseparable adhesions, had removed both ovaries and the uterus as far as the neck. The patient recovered. It appeared, however, that the operator had also injured the right ureter, for a urethral fistula formed in the cicatrix in the abdominal wall. This led to the patient going to Simon. After several unsuccessful attempts to cure the fistula, Simon at last *extirpated the right kidney*. He went in from the lumbar region, shelled the kidney out of its capsule, tied *en masse*, and cut it away. I saw the patient *cured*, and going about with the fistula also cured. The ligature threads had not come away. Simon now proposes extirpation of a kidney for such diseases as echinococcus, abscess, hydronephorsis, and renal calculi."

I may add that I have seen a healthy kidney, inseparably connected with a fibrocystic tumor of the uterus, removed with the tumor; and, although the patient died on the third day, there was not one symptom which could be referred to the loss of the kidney. The urine was normal in quantity and character, and there was no sign of uræmia.

I have also published cases which show that cysts of the kidney may be very successfully treated by tapping and drainage, and have joined in advising nephrotomy in some cases of renal calculi. When Simon publishes his case of extirpation of the kidney, he will no doubt discuss the principle of this operation, and we shall be glad to have a broad distinction drawn between cases in which disease of one kidney is killing a patient, and such a case as that of a urinary fistula where life is *not* threatened.

It may also be of some interest if I add that the lady from whom I removed a large fibroid uterus and both ovaries last summer, and of whose case I gave a short account in a paper on chloral in your number of October 2d, 1869, is not yet at all strong, and occasionally suffers from pain and sickness.

FROM the report of John W. Sawyer, M.D., Superintendent of the Butler Hospital for the Insane, Providence, R. I., we learn that there were in the Hospital, at the commencement of the year 1869, one hundred and fifty patients—seventy-five males and seventy-five females. During the year seventy-three have been admitted—forty-four males and twenty-nine females—making the whole number under treatment two hundred and twenty-three. Sixty-nine have been discharged—thirty-nine males and thirty females—leaving now in the house, one hundred and fifty-four patients, of whom eighty are males and seventy-four females. Of those discharged, thirty-three had recovered, nineteen had improved, nine were unimproved and eight died. Four of the deaths were from exhaustion from chronic mania, one from valvular disease of the heart, one from phthisis, one from epilepsy and one from paralysis.

The patient who died from phthisis had recovered from his insanity several weeks before his death, but his physical condition was such that I was unwilling to insist upon his removal, and he was allowed to end his days here. The patient who died of heart disease was in the house only forty-eight hours. He expired suddenly, but not unexpectedly, as he attempted to rise from bed.

The statistics show that the operations of the Hospital have been attended with very gratifying success. The proportion of recoveries is large and the number of deaths unusually small, being the same as last year. There have been, within the year, several cases of severe bodily illness, but no prevalent physical disease, nor any serious accident.

A Dislocation (Bilateral) of Fifth Cervical Vertebra, Successfully Reduced. By W. H. White, M.D., Springfield, Mass.—January 13th, I was called to see a son of T. J. S., who had received an injury while playing with a mate attending the same school. Upon inquiry, I found that he had received a severe blow upon the back of the neck from a playfellow during a game of "chase." He fell and remained there, insensible, until his teacher, missing him, found him in the yard, when she had him conveyed to his home. I was sent for immediately, and upon examination, found there was a dislocation of fifth cervical vertebra, with head thrown back, and permanently fixed, and face looking upwards. There was no paralysis, but the parts upon pressure were very sensitive. The posterior portion of neck showed deep depression, the anterior bulging out, size of half goose-egg, by forcing the "larynx" out of position. Swallowing somewhat difficult, and breathing somewhat labored.

The reduction was accomplished by seizing the head by chin and occiput (the patient being held in chair by the assistant) and all of my force used to draw head directly backwards, then upwards, and then forwards; the vertebra slipped in its normal position with an audible snap. He has experienced no inconvenience since, save a small amount of soreness; in fact, the third day after the reduction, he was trying to show his little sister how he could stand upon his head.—*New York Medical Gazette.*

DEATHS FROM CHLOROFORM.

☞ The State of Massachusetts imposes a fine upon the party responsible whenever a train on a railroad neglects to come to a stop at the intersection of another railroad; half the proceeds to go to the informant. The legislature would do well to inflict a similar punishment upon the administrator in every instance when chloroform is given by inhalation. Half the sum thus accruing to the treasury might be appropriated to the building of that monument of black marble in commemoration of the victims of chloroform, which it has been proposed to erect over against the ether monument in the Public Garden of Boston.

Death during the Administration of Chloroform by Sir James Y. Simpson.—We learn from the *Pall Mall Gazette* that a young woman has died from the effects of chloroform at the hospital at Alloa, the administrator having been Sir James Y. Simpson. The profession will receive with much interest Sir James Y. Simpson's own version of the occurrence.—*London Lancet*, Feb. 12, 1870.

The *British Medical Journal* for Feb. 12 refers to the above occurrence thus:—

"A death has occurred, during the administration of chloroform, on the operating table at the Alloa Hospital. Sir James Y. Simpson administered the anæsthetic; Sir James, however, informs us that the symptoms shown render it doubtful whether the patient died from the effects of the chloroform. We hope to be able to give full details next week."

Death from Chloroform; Fatty Degeneration of the Heart. By J. F. Miner, M.D.—The following case of apparent death from chloroform is of value, in a statistical point of view at least, and has some features of interest connected with the general questions of, to whom, and under what circumstances, is it safe and proper to administer chloroform.

Oct. 20.—E. B., aged about 40, received injury in coupling cars, the right hand being crushed between the car bumpers. He was brought into my office, and, upon examination, was told what was before quite apparent to him, that amputation of the forearm would be necessary.

He requested chloroform to be given, and I commenced its administration, while my private students arranged for the operation. The chloroform was given by dropping it upon a napkin and holding it at sufficient distance to allow ample atmospheric air. After breathing it for a few minutes he became talkative, and finally considerably excited, requiring restraint. He soon had a condition of rigidity of the muscular system, drawing back the head, as in partial convulsion. This condition attracted my attention, and caused me to withdraw the chloroform, though he had the second before talked loudly and profanely, and did not appear enough under its influence for me to think of permanently discontinuing it. His appearance was now peculiar and cannot be described by words. I noticed that there was something in his respiration and general condition which I had never before observed in patients inhaling the vapor of chloroform. I had merely time to say to my assistants his pulse is very weak, when I was obliged to finish my sentence by saying, it has stopped. Respiration ceased after one or two short inspiratory efforts, and my patient was dead.

Such is the brief history of what occurred before *post-mortem* examination, in which I was assisted by a number of my professional friends.

* * * * * * *

[An account of the autopsy is given, succeeded by the following—]

REMARKS.—The extreme fluidity of the blood, and the fact that both the right auricle and right ventricle were enormously distended, is, to say the least, peculiar—and affords much room for speculation. There was fatty muscular degenetion to an advanced degree, and yet it is very doubtful if this could have been detected by careful physical exploration, conducted at any time before the occurrence of the sad accident.

In most of the deaths from chloroform, where *post-mortem* examinations have been made, "fatty degeneration of the heart" is reported. This condition must be much more frequent than is generally supposed; and where there have been no signs or symptoms to indicate its existence, it cannot be discovered by manipulation or auscultation. * * * * * —*Buffalo Medical Journal*, January, 1870.

[It follows, then, that chloroform is liable to kill in cases where there is no special reason to anticipate a fatal result.—ED. B. M. & S. J.]

Probable Death from Chloroform.—Henry B., while intoxicated, fell in front of a R. R. Engine, which passed over his left leg below the knee, crushing and mangling it completely and frightfully. This was about 6 o'clock, P. M. He was immediately taken to St. Francis Hospital, and Prof. Hamilton called to see him.

He found the man cold, wet, and unconscious—in fact, in a state of shock that can only be contemplated in connection with such an injury.

He was placed in a comfortable bed, stimulants (hot whiskey) and morphine were freely given, and external heat applied. Under these he promptly reacted, but an operation was deferred until the next morning.

The morning following, the patient was in as good condition as could be expected of one thus injured. Pulse of good volume, not much accelerated, and regular. He was placed upon the table, was in good spirits, and in every respect seemed in a condition to endure the operation. An assistant gave the chloroform after the usual method, but it was noticed that the anæsthetic effect was produced unusually quickly. In fact, the patient was anæsthetized almost instantly. The pulse became slow, of little volume and irregular; the breathing irregular and intermittent, being of a somewhat spasmodic character. The symptoms becoming more favorable, the operation was performed, the leg being amputated at above the knee. There being no room below, nor sufficient uninjured soft parts for flaps in disarticulating at the knee joint, the indications were plainly to amputate immediately above.

There was but little hæmorrhage in the operation, nor had there been since the time of injury up to the time of and including the operation, enough hæmorrhage to produce any great prostration.

Soon following the operation, the pulse began to fail, became weak, irregular, and intermittent, the breathing interrupted and spasmodic, with gasping. Artificial aid was used to facilitate the respiration but to little purpose, and the patient soon ceased entirely to breathe.

This person being a stranger and his habits of life unknown, there was uncertainty in giving an opinion on the cause of death. May he have been an habitual drunkard, and, as long as excitement was kept up by the free administration of stimulants, have reacted and manifested but little shock, while, when this prop gave way upon the table, the powers of the system rapidly succumbed; or is this another of the mysterious freaks of chloroform?

This is the first case of death that has occurred in Prof. H.'s practice in connection with the use of chloroform. In this instance, he thinks it had such a suspicious part in causing death, that he has resorted to his former practice of giving ether where an anæsthetic is called for. Experience would indicate that, of the two, ether is the safer. If so, have we not had enough unequivocal testimony of deaths from chloroform, to prompt us to the employment of a safer, if not a better anæsthetic?—*New York Medical Gazette*, *Feb.* 5, 1870.

A demon in gin, residing in Brooklyn, named Cassidy, has been arrested on suspicion of causing his wife's death; both husband and wife were confirmed sots, and frequently indulged in mutual knock-downs. On Wednesday last the wife became the victim of the most shocking brutality at his hands, and while suffering from the injuries which led to her death endeavored to shield him by telling the physicians that they were caused by accident. *She took chloroform* to allay the pain, but had become so thoroughly exhausted by previous ill-treatment that *the application taxed her fast-ebbing strength beyond the power of her feeble constitution, and all attempts to restore respiration proved futile*, and the poor woman soon passed beyond the reach of the fiend whose crime she sought to shield.—*Boston Post*, Feb. 21, 1870.

Medical Miscellany.

Massachusetts Medical College.—The annual commencement for the conferring of medical degrees will take place at the Medical College on Wednesday, March 9th. The exercises will commence at 11½ o'clock, graduates reading selections from their dissertations. The degrees will then be conferred, and the exercises will conclude with an address by Rev. Dr. Peabody.

The Consumption of Tobacco.—The *Gazeta Medica da Bahia* learns from the Paris *Figaro* that Asia produces annually 155,000 tons of tobacco; Europe, 141,000; America, 124,000; Africa, 12,000; Australia, 400. The annual consumption of the weed in France is, of snuff, 7,800 tons; of smoking tobacco, 18,441; of chewing tobacco, 756; of cigars of various brands, 3004 tons. The bulk of the snuff is equal to that of thirty pillars each of the size of the column of Vendôme; that of the smoking tobacco to a cube of the size of the Arch of Estrella; and the cigars if collected and placed point to point, would occupy a line 74,360 miles long, or three times the circumference of the globe. These data are published by an association which has been formed in Paris, and which contains 1200 active members. It is called the *Anti-tobacco League*.

Dr. G. C. S. Choate has resigned his position of Superintendent of the State Lunatic Asylum at Taunton, much to the regret of the Trustees. The resignation does not take effect for some three months from this time. Dr. Choate, we are informed, goes to New York to practise in the special department in which he is so well versed. We are tempted to envy the metropolis so valuable an acquisition.

Prostitution in England.—The Editor of the London *Medical Times and Gazette* says:—"We think it may be admitted on tolerably good evidence that the English policy, by which prostitutes have been left to their own devices, so long as they do not annoy their neighbors, has been less productive of injury than that which has endeavored to put prostitutes down with a strong hand. Comparing our policy with that of countries where prostitution is forcibly regulated, we have to ask two questions—namely, whether this forcible regulation has resulted in less sexual immorality, and whether it is apparent that, on the whole, syphilis, as a disease infecting the national health, is less rampant than it now is amongst ourselves. We confess that, so far as we have been able to study the subject by the evidence furnished us, we are far from satisfied that this is the case. We are now speaking not of the military but of the civil population of these countries."

At the last meeting of the New York State Medical Society, Wm. Warren Greene, M.D., of Portland, was elected an Honorary Member.

Biliary Calculi.—Dr. Barclay, of Leicester, thinks that chloroform is an admirable solvent of biliary calculi. He gives it in doses of two or three drops three or four times a day. *Dublin Medical Press and Circular.*

Correction.—An ophthalmic friend has pointed out to us that his *confrère* Mr. Bader did not make the statement quoted by us in our last issue—that "no accidents of any kind have occurred with the nitrous oxide gas or the bichloride of methylene"—as a general proposition, but only as applicable to the Eye Department of Guy's Hospital. If Mr. B. had said none of the anæsthetics used had been fatal, the expression would have been free from the ambiguity, which was increased by his specifying the Hospital as the subject of another remark further on in the paragraph which was commenced by the statement in question. By leniency of construction we accord the correction.

To Correspondents.—Communications accepted:—Vaccination—Article by another "Innominatus"—Remarkable Case of Injury of the Brain.

Pamphlets Received.—Sixteenth Report upon the Registration of Births, Marriages and Deaths in the State of Rhode Island, for the year ending Dec. 31, 1868. Prepared under the direction of John R. Bartlett, Secretary of State. By Edward T. Caswell, M.D. Pp. 84.

Died,—In Philadelphia, March 2d, Dr. Thomas Dillard, Surgeon U. S. N., aged 70.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending Feb. 26, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases. Consumption.	Pneumonia.
Boston	112	24	5
Charlestown	13	4	2
Worcester . .	16	0	4
Lowell	20	3	3
Milford . . .	6	2	2
Chelsea . . .	8	0	1
Cambridge .	14	3	2
Salem	7	1	2
Lawrence . . .	9	2	0
Springfield .	13	4	3
Lynn	12	5	0
Pittsfield . .	2	0	1
Gloucester .	10	1	0
Fitchburg . .	4	1	2
Newburyport	2	0	0
Fall River .	12	1	1
	260	51	28

Five deaths from smallpox are reported; four in Boston and one in Worcester. Twelve deaths from measles reported; of which number five were in Lowell and four in Boston. Four deaths from scarlet fever reported; of which number two were in Boston. Six deaths from typhoid fever in all the above-named places.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending February 26, 112. Males, 44—Females, 68.—Accident, 1—apoplexy, 1—inflammation of the bowels, 2—congestion of the brain, 1—disease of the brain, 2—inflammation of the brain, 1—bronchitis, 3—cancer, 1—consumption, 24—convulsions, 5—cyanosis, 1—debility, 6—diphtheria, 3—dropsy, 3—dropsy of the brain, 2—drowned, 2—epilepsy, 1—erysipelas, 1—typhoid fever, 2—scarlet fever, 2—fistula, 1—gastritis, 2—disease of the heart, 5—intemperance, 1—disease of the kidneys, 1—congestion of the lungs, 3—inflammation of the lungs, 2—marasmus, 4—measles, 4—neuralgia of heart, 1—old age, 3—paralysis, 2—peritonitis, 1—pleurisy, 1—premature birth, 3—puerperal disease, 2—rheumatism, 1—smallpox, 4—unknown, 6—whooping cough, 1.

Under 5 years of age, 37—between 5 and 20 years, 9—between 20 and 40 years, 31—between 40 and 60 years, 17—above 60 years, 18. Born in the United States, 65—Ireland, 32—other places, 15.

THE

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Original Communications.

CONTRIBUTIONS TO UTERINE SURGERY.

By John P. Mettauer, A.M., M.D., LL.D., Virginia.

Uterine diseases, within comparatively a few years, have engaged the attention of medical practitioners, both in this country and Europe, to an extent commensurate with their high importance, and the various new methods devised and practised for the correction of those diseases during that period have in a vast number of instances been followed by the most gratifying results.

It is remarkable that these diseases should so long have, apparently, been regarded lightly by the profession, when they so deeply involve the dearest domestic relations of society, nay, in an important degree, the perpetuity of nations. More than twenty years the attention of the writer has been studiously directed to the investigation of these diseases, during which period numerous examples of them have been witnessed and treated by him. Very early in his professional life he felt constrained to relinquish, in a measure, the established methods both of investigating and treating uterine diseases, by means of their defectiveness, and, after much perplexity and trouble, to say nothing of his many disappointments and mortifications, comparatively new methods were adopted by him and carefully practised, some of which the cases about to be detailed are designed to exemplify and illustrate.

Case I.—*Scirrhus of the Os and Cervix Uteri.*—This case occurred in a married lady aged 38, who had been married eighteen years, but had never borne a child or been pregnant. The health, seemingly, was good for years after her marriage, yet she suffered from catamenial irregularities, with the usual sympathetic pains of the back, hips, bowels, &c. Almost constant leucorrhœa existed, the discharge being sometimes very copious, as well as variable in its qualities, being, when small in quantity, thicker, often rendering her diaper quite stiff. Two or three years before the writer was consulted, the general health gave way, manifested by loss of appetite, impaired digestion, constipation, debility, nervousness, restless nights, and marked emaciation. The peculiar aspect of the countenance induced apprehensions that cancer of the uterus existed, as it certainly displayed its characteristic cachexia. There was also strongly marked anæmia.

After this brief history, the case was subjected to a vaginal examination by the toucher, which disclosed enlargement and induration of the cervix, and ulceration of the os uteri. The enlarged cervix was about the bulk of an English walnut, somewhat flattened, excessively hard; and the os presented an abrasion rather than a true ulcer, both being comparatively insensible when pressed by the exploring index finger. The speculum was not employed, as the toucher had fully disclosed the character of the case, as far as it was attainable under the circumstances; and the diagnosis was, enlargement and induration of the cervix uteri, with ulceration of the os, as well as of the cervix, tending to, or complicated with scirrhus.

In treating this case the writer directed his chief attention to the ulcerations, hoping the enlargement and induration of the cervix might possibly be due to them. The nitrate of silver, in its solid dry state, was the chief topical remedy employed, which, after repeated applications, varying the intervals of using it from four to ten days, was abandoned, the enlarged and indurated cervix obstinately refusing to yield in the slightest degree after a trial of two months. Indeed, it was apparent that the enlargement had augmented, although the ulceration had disappeared.

Regarding the case as confirmed scirrhus, and being unwilling to endanger the patient from further constitutional contamination by delay, excision was determined upon and proposed, which the lady and her friends readily consented to.

For the operation, the position was not unlike that for lithotomy, the body resting on a high narrow table, with the nates near the edge, and the feet supported by a broad, thin board, on each side secured to the table, and projecting a foot or two beyond the border, and separated so as to allow room for the operator between them. It was not necessary to confine the lady, but only to support the knees and legs by an assistant on each side.

A three-bladed speculum, with the entering portion bevelled so as to be readily and perfectly adapted to the cul de sac of the vagina, was employed to bring the faulty cervix into view. Fairly exposed by the speculum held in position by an assistant, the scirrhous neck was drawn forwards and downwards by the assistance of a hook deeply inserted into its canal, and so held by the left hand of the operator. With a knife curved flatlong, spear-pointed, having a keen edge and a pretty long handle, directed by the right hand, and with a stabbing sawing movement around the diseased neck, it was rapidly and quickly excised, the line of incision extending beyond the border of the indurated mass fully four lines. The writer uses for these operations two knives curved in such a manner as to cut right and left. In this case, however, only one was employed. The hæmorrhage was slight, and comparatively little pain was experienced.

As soon as the bleeding ceased, the speculum being still in the vagina, the wound was filled with lint, saturated with a powder of equal parts of sulph. alum. and tannin, pressed firmly to its bottom with the dressing forceps, and there held for a few moments. The speculum was now removed without closing the blades, which completed the operation. For an hour the body remained on the table, to prevent disturbance of the lint by moving her before coagula had formed around it. She was finally placed in bed, comfortably covered, and soon fell into a quiet sleep, which was favored by darkening the room, and excluding the curious and noisy from it.

For several hours—two or three—the body remained quiet, sleeping the most of the time; until, finally, becoming warm from the complete development of reaction, she was aroused by a gush of blood from the vagina, and most profuse hæmorrhage followed. This, fortunately, was promptly arrested, however, by profound syncope, which for a considerable time seemed as if it would prove fatal. At length the swoon terminated, and restored consciousness was soon followed by sustaining reaction, and in all respects the condition was favorable, and the patient soon became cheerful. To guard against a recurrence of the hæmorrhage, rest and a quiet state of the mind was enjoined, as well as restrictions on diet. After three days the bowels were moved by a mild cathartic, and the vagina daily washed out with mild mucilaginous injections. Everything went on most favorably. There was not the slightest tendency to a renewal of the hæmorrhage. Slight vaginal discharges of bloody sero-mucus took place after the second day, which were soon followed by muco-pus in considerable quantity. On the fifth day the lint came away, or rather a coagulum resembling a dry eschar. The vaginal injections were continued, with directions not to lay them aside as long as there was any discharge from the vagina. For ten days after the lint came away, the nitro-muriatic acid mixture was used twice daily, before dinner, and breakfast, as an alterant. After this time the iodide of iron was employed instead of the acid, as a eutrophic tonic, for three weeks before the lady left me, with directions to continue it until her strength was restored perfectly; and then to lay it aside and use the Bedford alum spring water one season. Particular directions were given as to diet, a regular state of the bowels, and to guard against catarrhal influences.

This lady recovered rapidly, and now, fourteen years since the operation, enjoys excellent health for one of her age, being nearly 52 years old.

Case II.—*Scirrhus of the Os and Cervix Uteri.*—The subject was a lady, aged about 30 years, who had been married over seven years, but had never been pregnant, although her husband was apparently a very healthy man, and not over 35 years of age. Before marriage she had enjoyed only moderately good health, was somewhat anæmic, rather of sallow complexion, low spirited, her catamenia irregular in nearly all respects, and she was rarely, if ever, free from leucorrhœa. For several years before the writer was consulted, this lady represented that her general health was much impaired, so much so as to unfit her for the performance of even light domestic duties; and when he first saw her she was pale, bloated, exceedingly feeble, and without appetite.

The history given by the lady of her previous health, and her present condition, seemed to indicate the existence of some grave uterine disease, which a vaginal exploration disclosed to be precisely such as characterized Case I. The ulceration of the os and cervical canal, as well as the enlargement and induration of the neck, were exactly similar, in all respects, as also the vaginal discharge. There being no doubt that the case was scirrhus, or rapidly tending to it, a diagnosis correspondingly was expressed to the lady and her friends; but fearing such might not be the case, it was determined to make trial of the caustic treatment as in Case I. This was done, and faithfully carried out, but after three months' trial was abandoned, not the slightest benefit having resulted; on the contrary, the enlargement and induration seemed to have increased, and excision was determined on, which in all respects was executed as in Case I. This operation, however, was not followed by hæmorrhage as in that, nor was the traumatic hæmorrhage considerable. On the contrary it was slight, and the recovery of the lady was singularly rapid and perfect. The same general treatment was adopted as in Case I., in all respects. It is now more than ten years since the lady was treated, and a short time since the writer was informed that she enjoyed excellent health, but was yet sterile.

Case III.—*Scirrhus of the Os and Cervix Uteri.*—The subject of this case was an unmarried negress, about 28 years of age, who had labored under uterine disorders over two years. From the history she gave of her previous health, ulceration of the os and cervix uteri was supposed to exist, as leucorrhœa, and a peculiar adhesive vaginal discharge often made their appearance, and the catamenial periods were generally attended with more or less pain throughout the pelvis, often referred to the uterus, or bladder, and frequently extending into the lower extremities, in some instances quite to the toes. The general health was apparently much impaired, as the woman was pale, anæmic, feeble, and bloated; with very little appetite, poor digestion, and the bowels generally constipated. A vagina-uterine exploration by the toucher disclosed ulceration of the os, and cervical canal, with considerable enlargement and induration of the cervix itself, strongly indicating malignancy, or a tendency to it in the affected parts. Hoping, as in the other cases, that the caustic treatment might, perhaps, meet the indications, a fair trial of it was made, but proved unsuccessful, and excision was advised, which the patient consented to, and which was performed without delay, after the manner of operating in Cases I. and II., and with a result equally fortunate.

Case IV.—*Elongated and Enlarged Cervix Uteri.*—The subject of this interesting case was a married lady in high life, from one of the extreme Southern States, and the writer thinks she was about 35 years of age. Her history represented that for some years the general health had been infirm, and that the disturbing cause was referred to uterine irregularity. Failing to obtain relief at home in the South, she sought the advice of a distinguished northern practitioner, under whose professional care she remained until the breaking out of the late war. She was sterile, never having had the slightest reason to suppose conception had ever taken place with her.

The case had been, from the first, regarded as uterine, and most of the treatment while in Philadelphia, the northern city visited by her, was directed to the uterine system. From the history I was satisfied the case was uterine, but could only conjecture as to its peculiar character, and proposed a vaginal examination by the toucher, which was consented to, and which revealed very considerable elongation of the cervix uteri, with some enlargement. The elongated cervix occasionally presented beyond the os externum, when it caused considerable pain as well as inconvenience with the lady, and was moulded into a tubular form, fully two or three inches in length, with a transverse diameter rather more than three-quarters of an inch, and the canal fully half an inch in diameter, bounded by thick ligamento-tendinous walls.

At the time the examination was made a large clumsy U pessary occupied the vagina, which had been suffered to remain a year or more, doing no earthly good, but, on the contrary, manifestly hurtful, and it was removed at the cost of considerable suffering to the lady. This unwieldy instrument, in all probability, aggravated the hypertrophic condition of the cervix by its presence as a foreign body, as well as by maintaining it almost constantly in unsupported and depending relations with the walls of the vagina. It seemed to act very nearly as the ring pessary does, which the writer has often found tended to cause undue elongation of the cervix if long continued; it very probably aggravated the leucorrhœal flow, which was generally present, as well as disturbed, in some degree, the catamenial flow, which, however, was more natural than might have been expected under the circumstances.

The treatment which was adopted consisted of various astringent applications to the offending cervix, the chief of which were powders composed of tannin and sulph. alum., in equal quantities, astringent washes of strong alum-water and tincture of the unripe fruit of diospyros; and even the nitrate of silver was employed both in strong solution as well as in the dry state. For many weeks these measures were perseveringly employed, but without the slightest benefit; and believing nothing would relieve the lady of her troublesome infirmity but excision, it was advised, and was consented to and performed in the following manner:—

A moderately high bed was provided and properly protected with folded sheets. The lady was placed on the left side, the corresponding hip resting on the folded sheets and near the edge of the bed, with the knees together and the thighs flexed on the pelvis, so as to enable the operator to gain ready and unrestricted access to the region of the operation, and the faulty cervix with the right hand. Seated in a low chair, with the right to the edge of the bed, an attempt was first made to excise the cervix with strong scissors curved flatlong, conducted by the index finger of the left hand, and manipulated with the right, the whole proceeding being executed under cover. This attempt, however, failed, the dense ligamentous condition of the structures of the cervix refusing to yield to the scissors after repeated ineffectual trials to excise with them, and a scalpel with a short spear-shaped blade was employed. Carefully conducted to the proper point selected for the operation, about ten lines from the shoulder of the uterus, the point of the knife, guided by the left index, was forced into the anterior portion of the cervix with the right hand, pressing its back with the index and middle fingers at the same time, and rapidly carried around it with a sawing motion, the free portion of the organ being kept tense and out of the way with the left hand. In a few brief moments the operation was completed; was comparatively painless as well as bloodless; yet it caused considerable nervous shock. The depression, however, was soon followed by a tolerably well balanced reaction, which greatly composed the lady as well as inclined her to sleep, which, unfortunately, was interrupted by the sudden and unexpected appearance of a most deluging hæmorrhage after only a few hours of repose, displacing the medicated lint with which the wound was filled and well nigh destroying the patient. Fortunately, however, the hæmorrhage was promptly arrested by the energetic employment of the tampon medicated with the powder of tannin and alum, and strongly pressed against the wound until firm, restraining coagula formed.

The tampon was removed on the fourth day from the operation, having been loosened previously by suppuration, and the local treatment consisted now chiefly of daily vaginal injections of mucilaginous fluids, the chief of which was slippery-elm-bark tea, used cool.

As constitutional remedies, for the purpose of repairing the waste caused by the hæmorrhage, the muriated tincture of iron was prescribed, aided by porter and a generous diet. The solubility of the bowels was maintained by the use of mild aperients only when needed. A rapid recovery followed, which enabled the lady to return to her home in the far South in a month or two, where she has continued to enjoy excellent health. It is now about seven years since the operation was performed.

The scirrhous transformations of the uterine cervix in the preceding cases would, in all probability, have become ulcerating cancers sooner or later, if excision had not been resorted to. That they were of malignant character the writer has not a doubt, and he founds his opinion upon the attendant phenomena before excision and the heterologo-carcinomatous structural appearances after their removal. In each of the cases the facies carcinomatosus was unmistakably apparent, indicating constitutional contamination, notwithstanding the growths were of small size.

Case V.—*Carcinoma of the Uterus.*—The subject of this case was a negress, aged about 35, married, but had never conceived, and who had for years suffered from uterine irregularities. The condition of the uterus, as regards its pathological relations, before the case came into the hands of the writer, could not be ascertained; but it is probable that scirrhous induration, as well as intra-cervical ulceration, had long existed, and very probably caused the woman's sterility. When examined *per vaginam*, the os and cervix, as well as a large portion of the body of the uterus, had disappeared entirely, as they could not be discovered by the most careful examination by the toucher; and the chasm remaining would have readily received an egg of moderate size. The examination caused some hæmorrhage as well as pain, and the woman represented that bleeding was of frequent occurrence.

The health of the patient was greatly impaired, as emaciation and debility had nearly rendered her helpless. So appalling was the condition of this poor woman that the writer, after a full examination, determined to discard the case, believing it ut terly hopeless. The entreaties of the woman, however, induced him to alter his resolution, and merely to quiet her distress his consent to undertake to treat the case was yielded. To allow time for reflection, soothing vaginal injections were employed frequently during the day for several days. The bowels, in the mean time, were also attended to and regulated. At length it was determined to use the acid nitrate of mercury to the ulcerated uterus, which was applied by saturating cotton lint with it and then conveying the tampon-like body thus medicated to the affected parts through the expanded three-bladed speculum. The lint was heavily charged with the nitrate, but not to supersaturation, and carefully pressed into the ulcer. Over this was laid a thick pledget of lint saturated with salt water, carefully packed around the first dossil; and the whole being kept in position by moderate pressure made on its surface through the speculum with a probe, this last was carefully withdrawn without closing the blades.

Considerable pain was caused by the acid nitrate, but less than might have been expected. Salt-water injections were used to the vagina once in ten and fifteen minutes until the pain ceased, which subsided in the course of an hour. In three days, violent salivation came on, which continued over a month, during which there was no examination of the vagina or the ulcer. The lint came away during this time, but it was not known when. Vaginal injections of mild qualities were daily used. For the salivation the following mouth wash was employed, after various others had been used without any apparent benefit:—

℞. Acet. scil., ℥iiss.;
Spirit. nit. dul., ℥ij.;
Mel. despum., ℥iv.;
Aq. fontan. sufficient to fill a ten-ounce vial.

This, used in small quantities two, three or four times daily as a collutorium, promptly arrested the salivation and healed the mouth.

The condition of the uterus was examined into the fifth week after the acid nitrate was applied, and most unexpectedly was found to have healed entirely, but no os, cervix, or appreciable body could be discovered, and all discharge had ceased. From this time the general health rapidly improved, and in two months the woman was, apparently, restored to sound health, her recovery being greatly promoted by the daily use of iodide of iron and a generous diet. She lived four years after this severe trial, enjoying good health most of the time, but finally died of some acute disease, of the nature of which the writer has never been informed. Under all the circumstances, this certainly is to be regarded as a most interesting case, and the result was as unexpected as it was fortunate.

CASE VI.—*Cauliflower Excrescence.*—The subject of this case was a widow lady, about 50 years of age, who had borne many children, and whose health, down to the time her present disease commenced, was unusually good for a woman bearing children as rapidly as she had done. No reliable history of the early period of this lady's disease could be obtained; yet some uterine disorder was suspected to exist, and a variety of remedies had been employed in reference to such a state of the case. A vaginal examination was proposed and assented to; which, being directed through the toucher, disclosed the presence of cauliflower growths proceeding from the border of the os tincæ, with abraded ulcerations between the excrescences. The examination caused a slight bleeding, and there was an almost incessant discharge from the vagina of fœtid muco-purulent matter, often sanguinolent. The diagnosis, as stated in the caption, was cauliflower excrescence, and the following was the method adopted by the writer for its treatment. The lady being placed, as in the operation for scirrhus of the cervix uteri, the seat of the growths was brought into view by the employment of the three-bladed speculum, and so maintained by an assistant steadily supporting the instrument. By the use of scissors curved flatlong, the pendulous growths were now carefully excised in succession, which was greatly facilitated by drawing them forward and to one side, so as to fix and render them tense, with hooks. As soon as the bleeding moderated, a pledget of cotton-lint, saturated with a thin paste formed of gum-arabic and chloride of zinc, was applied to the surfaces of the wounds, and firmly pressed against them for a few moments. Over this another much thicker and saturated with potash water was laid, and kept in position with a probe, while the speculum was withdrawn without closing the blades, after which the probe was slowly and carefully removed. The chloride caused considerable pain, which, however, abated after a short time, and the lady then slept for some hours quietly. Recumbency in bed was enjoined, and mucilaginous vaginal injections were daily used from the second day to the sixth after the operation, when the parts were examined. They presented rather an unfavorable appearance, the wounds being uneven and of fire-like redness, and the eminences, as far as could be determined, seemed to be augmenting. It was now deemed proper to use heat for the destruction of the malignant growths, for which purpose the incandescent flat-globe cauterizing iron was profoundly employed through a hollow metallic speculum, with thick walls to prevent accidental burning, one of wood or leather not being at hand. As soon as the rapid cauterization was completed, the vagina was freely washed with cold water through the speculum, and the cauterized surface covered with a pledget of lint saturated with cold water, held in position with a probe, and the speculum carefully removed. The vagina was injected daily with cool mucilaginous fluids, taking care not to disturb the lint by their too forcible application.

On the thirteenth day after the initial operation, the diseased parts were carefully examined, using for the purpose the three-bladed speculum, and in all respects they presented appearances most satisfactory, the lint having separated and come away on the day preceding. Fearing, however, as there was still a raw surface, as well as some unevenness of it, that the original disease had not entirely yielded, an application of the acid nitrate of mercury was made to it with lint medicated with that fluid, and guarded with a compress saturated with salt water applied over it. The speculum was now removed, care being taken to support the lint-dressing at the same time. Daily vaginal injections of mild mucilaginous fluids, such as have already been named, were used, the bowels were kept soluble with mild aperients, and the iodide of iron was used as a eutrophic tonic, aided by porter and a generous diet. After another week an examination was made, and the entire surface presented the appearance of having completely healed. No other topical remedies were now employed but the mild vaginal injections. The iodide of iron was continued until the general health was restored, as well as porter and a nutritious diet, with aperients when demanded. In three months this lady seemed to have regained her health perfectly; and to the present time, now more than ten years since her case was treated, is as healthy as any female of her age. There never has been the slightest return of the local disease.

Case VII.—*Cauliflower Excrescence of the Uterus.*—The subject of this case was a married lady, about 50 years of age, who had borne several children, whose general health during her pregnancies and the nursing periods was good, but since the critical period of life it had in some degree deteriorated, and during the three years next preceding her visit to the writer was much impaired. The general aspect of the countenance most strikingly indicated the facies carcinomatosus, and the symptoms referable to the uterus and vagina, as well as the bladder, excited strong suspicion of the existence of some grave disease in those organs. A vagino-uterine examination, with the toucher first and afterwards with the speculum, revealed the true character of the disease, and the diagnosis was cauliflower excrescence of the os uteri.

This case was treated in all respects as its immediate predecessor, except in the use of the incandescent iron; and without detailing the treatment, it may be stated that perfect recovery followed, and the lady now, more than eight years since she was treated, enjoys good health for one of her age.

Case VIII.—*Ulceration of the Os and Cervix Uteri.*—This interesting case occurred with a widow lady, aged about 35, and who, although she had been married some years, had never been pregnant. When the writer was consulted, the lady had been a widow five or six years, and the last two or three her health had greatly declined, especially during the latter portion of this period, at which time her condition was deplorably bad. The emaciation and debility were extreme; so much so that the slightest attempt to raise the body from a recumbent posture caused faintness. She was, after encountering great difficulty, brought to the village in which the writer resides, on a bed, and the first interview he had with her on her arrival was most discouraging.

This lady had been under treatment for womb disease over a year before visiting the writer, and, strangely unfortunate, had never received the slightest benefit from anything which had been done for her relief. Although presenting little to encourage, a vaginal examination was proposed and submitted to, which revealed extensive ulceration of the os and cervix uteri, with such devastation of those organs as to form a cavity large enough to admit a hen's egg. The surface of the ulcerated parts was uneven, being formed into prominences and deep sulci, was sensitive, and disposed to bleed when touched. For many months there had been a wasting discharge of muco-pus from the vagina, and too frequent micturition. In many respects the ulcers resembled those of Case V., and it was feared it might be cancer, or rapidly tending to that condition. So unpromising, in all respects, was the condition of this lady, that the writer hesitated fully a day before consenting to undertake its treatment, next to be described.

The treatment consisted of cauterizations of the ulcerated parts, vaginal injections, and constitutional remedies designed to regulate the bowels and repair the general health.

For the purpose of cauterizing the ulcers, the position in bed on the left side was preferred, the legs being flexed on the thighs and the thighs on the pelvis; and the solid nitrate of silver was applied, with a suitable wooden crayon coated with it, under cover, directed by the left index finger and without the use of a speculum. To prevent accidental cauterization of the lining membrane of the vagina, a weak solution of common salt was injected two or three times quite up to the cauterized ulcers, immediately after each operation. Daily mucilaginous injections were used to the vagina. The bowels were kept soluble by mild aperients; and a generous diet was allowed, with mint julep before breakfast and dinner.

As constitutional remedies, two doses of the nitromuriatic acid mixture of 8 drops each were directed to be used before dinner and supper, mixed in cold infusion of wild cherry bark, and continued until the 7th day from the cauterization. On the 7th day the cauterization was repeated, and in all respects managed as the first. After this operation the muriated tincture of iron was substituted for the acid mixture, to be continued to the next cauterization. On the 12th day the operation was repeated and managed as the first in all respects. The iodide of iron now took the place of the muriated tincture, which, together with the blue phosphate, the lady continued to use until she left me. The cauterizations were now repeated once in 8 days, and at the expiration of five weeks this terrible case had so far ameliorated as to enable the lady not only to walk about the house and yard, but to return to her home some twenty miles distant.

After leaving the immediate care of the writer, the health of this patient improved rapidly under the use of the iodide of iron, and a generous diet, the mint julep being also continued, and in three months seemed to be completely restored; yet she returned then for an examination, which disclosed an inconsiderable ulcer of the os. This was cauterized twice after an interval of a week, and in a week more the lady returned home. For nearly two years the writer lost sight of this lady, only hearing occasionally, through her neighbors, that she had entirely recovered her health; until, meeting her in a store in a neighboring town, she remarked, in response to my complimenting her on her greatly improved and healthy appearance, playfully, that she felt as if she could bound over a gate post. It is now 12 years since this case first came under the care of the writer, and the lady remains well in all respects for one of her age.

The points of chief interest in this case were the great extent of the ulceration of the os and cervix uteri, the extreme emaciation and debility which accompanied it, and the rapid as well as perfect recovery which followed the method adopted for its treatment. In largely over three hundred similar cases of ulceration of these organs, of nearly every conceivable form, extent, and depth—none, however, equalling in intensity the case reported — the writer has successfully employed the method described here, with such modifications as particular examples demanded from time to time, both in the topical and constitutional measures. Many of the cases were complicated with irritable bladder; retro- and antero-version of the uterus; various irregularities of menstruation; leucorrhœa; lumbago; neuralgia and partial paralysis of the lower extremities; neuralgia of the head, chest, back, hips, bowels, upper extremities; amaurosis; deafness; dyspepsia; mental derangement, or nervousness bordering on that condition; and generally, sterility with married females. Irritable bladder, attended with painful micturition, and anteversion, complicated a vast number of the cases. And virgins were very nearly as liable to this disease as married, or widowed females. The speculum was only employed in three of the cases of ulceration, and in these examples it became necessary, by reason of the great length of the vagina, and the high position of the uterus in its cul de sac, rendering the os and cervix inaccessible to the toucher.

Prince Edward C. H., Va., Jan. 10, 1870.

At the annual commencement of Bellevue Hospital Medical College, N. Y., Feb. 26, the graduating class numbered 140.

MEDICAL EDUCATION—A CASE IN POINT.

[Mr. Editor,—Much has been said of late on the necessity of better educating medical students, and probably with good reason in many quarters. But while deficiencies are thus persistently sought out and exposed, may not recent great advances be in danger of being ignored or underestimated? The systematic and thorough examination of patients by those who have just left the schools, the nicety of their differential diagnoses where there is obscurity and doubt, and their brilliant analyses of intricate cases, may really astonish a veteran just passing off the stage. It seems as though there never were so many talented, well educated, unpretending and zealous young men in the profession as have recently entered it. Their knowledge of disease, its manifestations and its sequences; their acquisitions in the many collateral sciences; their facility in utilizing the various appliances which the arts have placed in their hands, were certainly never exceeded, if ever approached in the generations that have gone before. Those now in midway course must look to their laurels or they will soon find themselves outstripped on the road. When our new comers shall have added to their acquisitions, derived largely from dispensary and hospital practice, a little experience in the *domestic* management of the sick, and this will soon come, the profession will have at the service of the community a phalanx of practitioners to be truly proud of; one never before equalled. Fortunate the community that can rightly appreciate the advantages thus placed within its reach; for now, as of old—

> "A wise physician skilled our wounds to heal
> Is worth whole armies to the public weal."

We have been led into the foregoing remarks by reading a report of a case, prepared by a medical student, in his second year, when drawn by lot to attend a patient and to report the case on a given day for the criticism of his fellow-students and teachers assembled for the purpose. The time was short, and, in casting about to find opportunity, he applied to a practitioner, who took him to the house of a patient whose case would try one's powers of observation and test his skill in diagnosis; and left him there, unaided.

A few days ago the manuscript of the report, as originally prepared, came into my possession, and I send it to the Journal, asking you and your readers if, on perusal, it does not go far to confirm my previously expressed impressions. Remember, it was only the ordinary task of a student (and there are scores with us like him), prepared without the remotest idea of publicity beyond the class-room—to meet the teachers' demand, and to be read *once* only to fellow-students. How many of us, after years of routine practice and so-called experience, could make a better exhibit? I give in my adhesion to the coming men. Here is the case. Old Subscriber.]

Case of Mild Typhoid Fever.

My patient is a lad of fifteen years, now fitting for college at an academy, and is apparently possessed of more than an average share of intelligence. On October 30th he first sought medical advice; and I obtained from him the following history.

About ten days previously he had begun to feel sick, was disinclined to study; had bad headache and was troubled with constipation of the bowels, which lasted about three days. He then took a dose of rhubarb, which caused an unexpected amount of purging, and more or less subsequent gurgling of the bowels. This, however, moderated in a day or two, but meanwhile he had grown so weak and his room was so cold, that he took to his bed. He had strength sufficient to have sat up if he had wished, but felt more comfortable in bed. After three days thus spent, he came home to Boston, being much exhausted by the journey, and appearing pale and haggard to his parents on his arrival. He was at home three days before they sent for a physician.

I found him up and dressed, and he was able to walk up stairs to see me. Tongue was moist and somewhat frosted at the back part, though bright and red at the edges. Pulse about eighty. Countenance sickly looking, and under the eyes and above the corners of the mouth of a dingy hue. Appetite he thought was not bad. Abdomen on pressure gave him no pain, and scarcely more tenderness was shown than one might expect from a part which even in the healthiest quickly resents intrusions. But scattered over the abdomen and the lower part of the chest were eight or ten papules or rose-spots which paled on slight pressure of the finger. There existed no tympanites, nor did I observe any sudamina. His bowels had been pretty regular since his return home, having a daily solid discharge. He had no cough, nor any bronchial disturbance. There was no chill when first taken. Urine was high colored and had been rather scanty.

Upon inquiry I found that typhoid fever had been prevalent among the academy students the past few weeks. The patient had suffered from frequent epistaxis during the early part of his illness. Sometimes it occurred in the night, his bloody pillow alone betraying it in the morning. He had noticed that he easily became heated, and sweated freely. On his arrival home his mother gave him the family panacea, "a good sweat," by piling on bed clothes and pouring down hot tea, which process succeeded in making him feel yet weaker. His mother remarked that he seemed to be tired and sleepy much of the time, and inclined to take naps on the sofa in the afternoon.

Tuesday, Nov. 2d, three days after, was revisited. Patient somewhat brighter. Bowels moved once or twice a day. Rose spots, save one or two doubtful remains, have disappeared. Temperature of axilla at nine o'clock, A.M. 99·2° F.; at half past four o'clock, 99·8° F. Pulse remains at eighty. Is still dull and sleepy in afternoon. Mother says he looks worse when asleep than when awake. Epistaxis occurred once since his return home. Tongue furred a little; urine was of a pale straw color. Upon examination, found reaction, acid. Sp. gr. 1017. Urophaein diminished very sensibly. Chlorides rather less than usual, and urea not abundant.

Monday, Nov. 8th. Seen again. Patient quite animated, pulse normal, temperature at five o'clock, P.M., 98° F., countenance more healthy looking. Still feels so weak that he keep the house. Talks a good deal about going out and doing various things, but is easily discouraged and wearied in doing any thing in particular.

The general absence of any marked local symptoms excludes the idea of any of the local diseases. The season of the year, the youth of the patient, his expose to contagion of typhoid fever and his feverishness lead one to look for that disease. The headache, prostration without adequate cause and the abdominal rose-spots rather confirm the suspicion. The hyper-catharsis, epistaxis and somnolency are also diagnostic of typhoid. Still these symptoms present a much more formidable array on paper than they did to my mind while examining the patient. Moreover he says he is subject to nose-bleed while in health. The prostration was less marked than in any case of typhoid I have ever seen, the patient being able to go about the house and do everything for himself. The absence of diarrhœa is a serious defect for a thorough case of typhoid. But although the symptoms are all slight, they amount to something altogether, and in my opinion the patient suffers from what Louis calls "latent typhoid," or "typhus ambulatorius."

The causation of this case has considerable interest. Sir Wm. Jenner in his recent address before the British Medical Association speaks of the firm establishment of the fact that drinking water is one of the greatest agents in the spread of typhoid fever; says it is, if possible, less disputable than the spread of cholera by the same means, namely, the contamination of the water supply by the excreta. Now at the Academy there is a large dormitory where most of the students live, and they all drink from a common well which is but a short distance from the outhouse vault. Also all the slops are poured out on the ground close to this well. The water is said to have tasted badly for years, and perhaps had some connection with the spread of the epidemic. There were, however, cases of fever in the town, and this year a greater number than usual according to the resident physician.

To what extent a physician would want to alarm a family by the assurance that a boy slightly ailing and about the house had typhoid fever is a question. I should give a favorable though cautious prognosis, bearing in mind that the mild cases of typhoid are thought to be even more liable than severe ones to perforation and peritonitis. We should be careful not to assure the patient of too speedy a recovery, as the symptoms though not intense, may be tedious and persistent, especially the weakness and listlessness. The removal from the neighborhood of the contagion allows us to expect a more favorable result with greater certainty. Another question which the physician must answer is, how soon may the lad return to school and run the risk of renewed exposure to contagion.

By removal from the Academy, and its surrounding deleterious influences whatever was their nature, I consider that the patient has had the most energetic treatment possible. Beyond this, rest in bed or on a lounge, sleep when desired, and a farinaceous diet, rice, toast and milk were enjoined. Baked fruit and lemonade were allowed, as there was no diarrhœa. The patient's family, fearing constipation, were anxious to have the bowels kept open. This desire was resisted as it should be. No drugs were given throughout the illness save the rhubarb taken at its first invasion, so that the disease presents its natural history. This method of treatment I find is practically much more difficult to sustain throughout a case than is drugging.

CHLOROFORM AGAIN.

By another INNOMINATUS.

"MYSTERIOUS OUTRAGE AND ROBBERY OF TWO LADIES.—Mr. Philip Oliver, of Peabody, alarmed at the protracted absence of his wife, who had gone to Salem, started out on Saturday night, and when a short distance from his house, found his wife in an unconscious state on the ground, with a female friend of his named Adams. He procured assistance and took them home, when he found they had been robbed of all their jewelry, rings, breastpins, waterfalls, &c. A physician was called, and after some time succeeded in restoring them to consciousness. *They were evidently drugged with chloroform.* No clue has as yet been found to the perpetrators of this daring outrage."

The above is from a Boston paper of February 23d, 1870. Who beside the newspaper says they were "drugged with chloroform"? And is that the whole story? Who, and how many were the assailants? Can the ladies describe them, and the struggle? The last sentence, however, says—"No clue has as yet been found to the perpetrators of this daring outrage."

Occasionally we hear of some house entered and robbed, the inhabitants not being wakened, and we are told that it was done by the aid of chloroform, but no one seems to remember the struggle, nor the smell of the powerful drug. Is it possible, that the first whiff of chloroform will not awaken a sleeper? and even if overpowered and forced to take the second whiff, is it possible that the memory of the first should be lost?

Again we are told, that the air in a store filled with people is so impregnated with chloroform that pockets may be picked with impunity. But no one sees the assailant, and no one smells the drug, and none of the company but those whose pockets are picked remember that they felt queerly.

Within a week, the writer has seen a lady, who claims to have been made insensible in a dry goods store; walked a half mile afterwards; fell and bruised her head severely, while going up stairs in a friend's house; and remembers only the fall, and yet she was absent from home but two or three hours.

These are by no means isolated cases. But why attribute them to chloroform? Can chloroform be deodorized? Can the subject be put under its influence without knowing it? After he recovers from its sleep, can his memory of the first inhalation be blotted out?

Chloroform has enough sins to answer for. Is it guilty of all that it is charged with?

Two questions more. Who was the "physician called? and after some time succeeded in restoring them to consciousness?" How did he do it? Those of us who do not believe in chloroform would like to know how.

Bibliographical Notices.

Personal Beauty: How to Cultivate and Preserve it in accordance with the Laws of Health. By D. G. BRINTON, M.D., &c. &c., and GEO. H. NAPHEYS, M.D., &c. &c. Springfield, Mass.: W. J. Holland. 1870. 12mo. Pp. 346.

THIS book is not written to compete with Madam Rachel of "beautiful forever" notoriety. The embellishing procedures it recommends do not extend to rouge or painting; but only about as far as what the carriage renovators call "touching up and varnishing." It is well written, as is all that comes from the pens of Drs. Brinton and Napheys. But we cannot help feeling that its scope is hardly worthy the science and position of those gentlemen. Nice thick paper—very excellent type.

Clinical Lectures on the Principles and Practice of Medicine. By JOHN HUGHES BENNETT, M.D., F.R.S.E., &c. &c. Fifth American, from the Fourth London Edition. With 537 Illustrations on Wood. New York: William Wood & Co. 1870.

WE are the happy possessor of a copy of the newest American Edition. The last edition was noticed in this JOURNAL Nov. 28, 1867, with unqualified praise. We presume Messrs. Wood & Co. will have no copies left on their hands.

PROF. NATHAN R. SMITH has resigned the chair of Surgery in the University of Maryland, which he has filled with great ability for the past forty years.——According to the Catalogue of the Jefferson Medical College of Philadelphia for the session 1869–70, it appears that the number of matriculants for the session is 435.

Medical and Surgical Journal.

BOSTON: THURSDAY, MARCH 10, 1870.

[WE have again the honor of seeing this place in the JOURNAL occupied by DR. JACOB BIGELOW. The following letters and extracts will throw further light on the subject of anæsthetic discovery, which has just been receiving a new phase from recent assumptions made in regard to it in the city of Edinburgh. A part of the correspondence has already been published.]

ETHER AND CHLOROFORM—BOSTON AND EDINBURGH.

CORRESPONDENCE OF SIR JAMES Y. SIMPSON AND DR. JACOB BIGELOW.

BOSTON, Feb. 27, 1870.

Sir James Y. Simpson:

DEAR SIR,—In the *Edinburgh Daily Review*, Oct. 27, 1869, is contained some account of an ovation given in Edinburgh to Sir James Y. Simpson in recognition of certain material advantages enuring to that place from his residence in the city, and of his "*discovery*," in the words of the Lord Provost, "*the greatest of all discoveries in modern times, the application of chloroform to the assuagement of human suffering.*"

As this appeared to confound what may well be spoken of as one of the greatest discoveries of modern times, with the later and more objectionable use of chloroform to imitate its result, I endeavored to define the respective claims of America and Scotland, in an explanatory article, subsequently published in the Boston Medical and Surgical Journal, from which the following is a brief extract:—

"It is not wonderful that in the designs of Providence medicinal agents should exist, capable of averting pain by the suspension of sensibility. But the wonder is that after mankind has borne pain ever since the creation of their race, any person should be found of sufficient courage and strength of conviction to put through the untried and formidable experiments necessary to decide whether life could continue, under the inhalation of a scarcely respirable vapor, carried to such an extent as to destroy sensibility and produce apparent death. That man was not Sir James Y. Simpson."

My remarks were replied to with some asperity by yourself, in a letter sent to me, which I supposed to be of a private nature, and therefore sent you the following response, not then knowing that its publication in print had been already ordered by yourself.

BOSTON, U. S. A., Jan. 29, 1870.

Sir James Y. Simpson, Bart.:

MY DEAR SIR,—I acknowledge the receipt of your letter of the 3d inst., and have also received from a friend, a copy of the London *Medical Times*, both expressing disapprobation of remarks published by me in the Boston Medical and Surgical Journal for November 25, 1869. I at first had a question whether I should not publish a a part of your letter, with comments, but being unwilling to commit an act of discourtesy towards one for whom, in common with the rest of the medical world, I entertain an exalted respect, I lost sight of the matter.

I am not disposed to pursue the subject farther, now that it seems all parties are so nearly agreed as to the facts of the discovery. The erroneous impression seems to have been made by the Lord Provost of your city, whose seemingly exclusive assumption remaining uncorrected by any one, shut out the American hemisphere from the credit of the discovery.

Poor Morton is dead, and is to have a monument. He was not a man of much cultivation or science. But like the pioneers who have penetrated the Arctic regions and the deserts of Africa, he had a hardihood and tenacity of purpose which carried him where more cautious and perhaps better instructed men had failed to advance. As far as we know, he is the *only man*, without whom anæsthetic inhalation might have remained unknown to the present day.

I have requested my publishers to forward to you, through Messrs. Sampson, Low & Co., a copy of my work called "Modern Inquiries," which I shall feel flattered if you will do me the honor to accept. Very respectfully yours,

Jacob Bigelow.

But as your letter to me may, by its publication, tend to mislead the unprofessional part of the community, it becomes necessary to extend my reply, which I now publish as final; and before so doing, I have read your letter somewhat more carefully than at first seemed necessary.

Let me say at the outset, that you misstate my words when you represent me as saying that you were "not the first man to inhale a vapor to such an extent as to destroy sensibility." This was not what I said. What I did say of this "untried and formidable experiment" is reprinted above. Of course no man could experiment decisively on himself. No man, when etherized, could operate in any way on himself, nor could he, adequately, test on himself the degree of insensibility which surgeons require in their operations.

For more than twenty years sulphuric ether has been extensively used in the country of its discovery. It has proved itself to be one of the safest and most manageable of medicinal agents, and when administered to others may be fearlessly urged to the extent of profound insensibility, and to this extent it is always carried by humane and intelligent surgeons. It is only chloroform which has piled up its hundreds of cases of disaster and death.

To judge from the array of rules and precautions laid down in the *British Medical Journal* of Dec. 4, 1869, and copied as a curiosity in the Boston Medical and Surgical Journal of Feb. 17, 1870, almost a little science has grown out of the nominal and mostly fruitless precautions, which are brought out in showy opposition to possible, and too often probable deaths from the effects of chloroform.

You correctly quote the words of the Lord Provost, and I am quite ready to make due allowance for any "nervousness and timidity" which prevented you from disclaiming the honor of being one of the greatest medical discoverers of modern times, because you first applied chloroform to produce anæsthesia. But I felt it a duty, in behalf of my own country, to correct the statement of the Lord Provost, who obviously confounded the modern discovery of a *sure and safe anæsthesia* which belongs to Boston, with the subsequent application of chloroform to the production of anæsthesia in Edinburgh; and was the more impelled to do this because the same mistake not unfrequently occurs through the ignorance or inadvertence of English writers; and especially because there seemed to be also a tendency, in some of your own writings, to foster and encourage this mistake.

Here was the great medical discovery of the nineteenth century, perhaps the greatest since the creation of the world; which dated from experiments made in Boston, in Tremont Street and at the Hospital. It furnished to the world a *complete and optional exemption*, during several hours at a time, *from the severest pain*; an anæsthesia *sure to occur* when desired, in every case without fail, and which *was free from danger* (which cannot be said of chloroform); an anæsthesia unlike any previous one, at once *certain, complete and innocuous.* Such was this discovery, of wonderful perfection at its very outset. No European surgeon then pretended to have heard of such a discovery before, and your own English friends were among the first to recognize its magnitude. It was revealed to the world, not gradually, but flashed upon it abruptly: and in less than three months afterwards, "in grateful and unhesitating recognition of it, the entire civilized world simultaneously rose up to hail it with acclamatory welcome." This was in 1846.

We may now turn for your own recognition of this boon to the human race, to the "Encyclopedia Britannica, 1854," article "*Anæsthesia*," and read "*See Chloroform.*" Under the latter title, we find an elaborate article of many pages, containing as one of its titles, the "*History of Anæsthetics*," and the following paragraph offered as this "*History.*"

"The vapor of chloroform was first proposed by Dr. Simpson as an anæsthetic agent in surgery and midwifery in 1847. For a year previous, the vapor of sulphuric ether had been *used to a considerable extent*, both in America and Europe, for the purpose of inducing insensibility to pain in surgical operations. It was first practically adopted for this purpose in 1846, by Dr. Morton, a dentist at Boston in America. Subsequently, Dr. Charles T. Jackson, of that city, claimed the right of having suggested to Dr. Morton sulphuric ether as an agent capable of producing insensibility to pain. But the power of producing, by the vapor of sulphuric ether, an insensibility exactly like that produced by the inhalation of nitrous oxyde gas, *had been long previously known*," *&c. &c. &c.*, and so on back through that history of the middle ages which you have substantially reproduced in the letter you have sent me.

This from an article signed J. Y. S., is offered by you as a "History of Anæsthetics"—a history of the great modern discovery of a sure and safe anæsthesia by ether, completed and perfected years before this was written. No "nervous and timid" condition dictated the deliberate sentences in this "History of Anæsthetics" by Dr. J. Y. Simpson. The excuse that they were uttered "on the spur of the moment" will hardly serve to cover this inversion of historical order in favor of the self-exaltation of the writer. This was not a time when there were only "a few, short minutes." The ample pages of the "Encyclopedia" afforded you abundant opportunity for doing liberal justice to the great American discovery, had you so intended.

Your possible reply that this was an article on chloroform, not ether, will hardly avail one to whom the whole subject of anæsthesia by inhalation was intrusted in a great literary and standard work, and who availed himself of this opportunity chiefly to place himself conspicuously in the foreground.

The letter you have done me the honor to address to me, is open to criticism of the same general character. A considerable part of it is occupied with a cloud of antiquarian dust, of which the only apparent result is to obscure the truth, and create a confusion in the mind of readers, in the midst of which, chloroform may be advantageously introduced. Your logic confounds in the same category both beneficent and detrimental agencies, the etherization practised in America, and the cruel spectacle of the asphyxiated dogs in the Grotta del Cane. No one will disagree with you that it would have been "sadly out of place on such an occasion and with such an audience," to have entered into the details of "soporific vapors and measures employed by different olden surgeons in Greek, Roman, and mediæval times, with the view of rendering their operations painless to the patient." In this way you say you "might easily have shown that the idea of making a patient anæsthetic," was a kind of knowledge (what knowledge was there?) familiar even to non-professional writers of mediæval and of later times, and that some theological writers, like Origen, for example, in the third century, allude to the artificial production of anæsthesia in surgery, as a well-known practice." You also quote the "Abbot Bower," and "the Monk Joceline," who alludes to an instance of it in the Hagiology of Scotland, &c., and so on down to the times and discoveries of Sir Humphrey Davy, about seventy years ago.

I did not desire to provoke this mediæval history; I only wished that you might have explained what the Lord Provost evidently did not understand, the difference between the modern discovery of anæsthesia and the less important use of chloroform.

Everybody knew that people could be made drunk with alcohol, or narcotized with opium, or asphyxiated and poisoned with noxious gases, or made insensible with nitrous oxyde. But these expedients were all abandoned even by their strong partizans as *uncertain* or *unsafe*. No educated surgeon would have recommended one of them in a case of responsibility, as efficient or free from danger. But with ether came "the triple and demonstrated discovery, not of a probable and untrustworthy, but of an inevitable, complete and safe anæsthesia."

Your prolix mediæval history is simply irrelevant and its application illogical. A man who would believe your deductions from it, would also believe that balloons and gas lights were known to the ancients because the classical writers believed in wax wings, and subterranean fires. Sir Humphrey Davy must be exonerated from all practical knowledge of anæsthetic inhalation. Otherwise he is chargeable with all the tortures of amputation and lithotomy which have taken place since he made the discovery and concealed it.

The great discovery having been made of a secure, perfect and always attainable anæsthesia, the substitution for ether of chloroform, preferable in odor and bulk, but so far more dangerous that no life insurance company would take the risks as equal, is a matter of much less important detail.

And so of the further application of the newly discovered anæsthesia to the different forms of pain. You object to my statement which you quote, that anæsthetic inhalalation "began in America, and was first used in the extraction of teeth, and afterwards in capital operations in the Mass. General Hospital, and in obstetrical practice;" the last three words of which, afford you the text for several paragraphs of animated invective with which you close your letter. Had I attached the same importance which you do to your agency in this detail of obstetric application, I should probably have given it more prominence and careful attention. I do not now question that you were the first to use ether in labor, but who first introduced anæsthetics in obstetrical practice is a matter of limited importance. Soon after the great discovery of etherization was made, the pages of medical journals, and the meetings of medical societies, were crowded with reports of its application to most of the ills and difficulties which flesh is heir to—colic and convulsions, dislocations, hernia and parturition, neuralgia, gout, gravel and gallstones—each heralded by its respective claimant as an original discovery. The several glories of these *ex-post-facto* benefactors of man, may perhaps pass into oblivion, unless rescued by some future Council of Edinburgh. The world is more interested about the origin of great discoveries than the question who afterwards suggested their various applications.

Finally you allude to the monument erected in Boston by a public spirited individual, and which, among others, bears the following inscription. "To commemorate the discovery that the inhaling of ether causes insensibility to pain; first proved to the world at the Massachusetts General Hospital, in Boston, October, A.D. 1846." You inquire why no individual names were inscribed upon it. I reply, because it was intended only to commemorate the city of Boston as the birth-place of the discovery; perhaps in prophetic view of some effort to confuse the history and relations of the whole subject, and then to connect some other name and place with this discovery.

Mankind are not apt to forget their benefactors, nor even those who stand in the place of benefactors. They cheerfully unite in ovations and festivities given to distinguished men by "their friends and fellow citizens." But the suffering and now exempted world, will not forget the poor dentist, who amid poverty, privation and discouragement, matured, revealed and established the most beneficent discovery which has blessed humanity since the primeval days of Paradise.

Your obedient servant,

Jacob Bigelow.

Extract of Conium.—We have been favored with the following explanatory note to Mr. C. I. Eaton, of Boston, from Dr. E. R. Squibb, of Brooklyn, N. Y.:—

Dear Sir,—I tried to explain the difference in the extracts of conium seed in my notes to price list, but the inquiries I have received since show that I failed, and the time required to write out plainer explanations makes serious inroads upon my occupation.

I had 101 pounds of the undried fruit or seed collected, and separating the 1 pound had the 100 pounds ground up at once with alcohol while fresh. The 1 pound was carefully dried, as is usual in preparing the dried fruit. In drying, this 1 pound lost 65 per cent. of its weight, weighing just 35 per cent. of what it weighed when green. Then the 100 lbs., guided by this experiment, was made to measure minim for grain of the 35 pounds. That is, the 100 pounds green represented 35 pounds dry, or 245,000 grains, and the resulting fluid extract was made to measure 245,000 minims. Therefore the difference in strength between the preparation made from the dried and the undried fruit is, that the latter is stronger by the amount of active principle, which would have been lost in the drying, as stated in the note on the list. How much this is I cannot tell, but it cannot be enough to affect the dose very much, since the same dose is often used of the fluid extract of the leaf and fluid extract of the seed, when the latter is from five to seven times stronger than the former.

Very truly yours, E. R. Squibb.

We have received the Fifth Annual Catalogue of the Officers and Students and Programme of the Course of Instruction to the Massachusetts Institute of Technology, 1869–70. We copy the passage relating to—

"*The Architectural Museum.*—A large number of photographs, prints, drawings and casts have been collected for this department, by means of a special fund raised for the purpose. This collection includes a number of English and French watercolors, mostly of architectural subjects, several lithographic publications issued by architectural students in England and on the continent, and photographs from the competition drawings for the Foreign Offices, the Law Courts, and the National Gallery in London, and others from French competitions for public buildings, and from the *Concours* of the *Ecole des Beaux-Arts*.

"The collection of casts comprises both architectural details and specimens of carving and sculpture illustrating almost every period of art. It includes a large and valuable collection of sculptures from the choir of Lincoln Cathedral, and contains also several models of temples and other buildings lent to the School by the Boston Athenæum.

"To these collections the following additions have been made by gift :—

"A considerable collection of photographs and lithographs of great interest presented to the Institute by French and English architects, taken from their own works and from their drawings, including photographs of the details of the New Opera House in Paris, presented by Mr. Charles Garnier.

"A complete series of drawings, mostly presented by Ernst Benzon, Esq., of London, formerly a merchant of Boston, illustrating the course of Architectural instruction in the *Ecole des Beaux-Arts* in Paris. *Esquisses-Esquisses, Projects Rendus, Projet d'ordre, Projet de Construction, Grand Prix de Rome, Envoi de Rome.*

"Specimens of modern English stained glass and tile-work, partly purchased, and partly presented by the makers, with cartoons and drawings illustrating the processes of the manufacture.

"Besides the publications of the Royal Institute of British Architects, and of the Architectural Institute of Scotland, and the miscellaneous papers of the Architectural Publication Society, presented by the authorities of these institutions, the following valuable works have been added to these collections by the French Minister of Public Instruction :—Monographie de la Cathédrale de Chartres ; Statistique Monumentale de Paris ; Monographie de l'Eglise Notre Dame de Noyon ; Iconographie Chrétienne ; Comptes de dépenses de la construction du château de Gaillon ; Histoire de l'architecture monastique."

We are told that the pupils make "Excursions for the Inspection and Study of Machines, Processes of Manufacture, Buildings, Works of Engineering, Geological Sections, Quarries, and Mines. In aid of the practical studies of the School, and as a means of familiarizing students with the actual details of work, they are required to make visits of inspection to machine-shops, engines, mills, mines, furnaces, and chemical works, and to important buildings and engineering constructions which are within convenient reach.

"With a like view they are expected to spend parts of their vacations in excursions for observation and practice."

Naval Staff Rank.—We should suppose that the straightforward letter of General Sherman would decide the naval committees in favor of positive rank for the naval "staff." The general distinctly states that "In the army all our 'staff' officers have actual rank. They hold commissions from the President as generals, colonels, majors, captains, etc., which fix their pay, allowances, precedence and privileges generally. But the sixty-second article of war clearly establishes who is to command." This is exactly the status asked for in the navy, viz.: positive rank for paymasters, surgeons and engineers—their authority to be confined by law to command in their respective departments alone. The gallant general, alluding to his naval experience, tersely remarks that he "does not want to go to sea in any vessel with more than one captain, or when, in case of accident to him, the right and power of his successor are not clearly defined by law or naval custom." This is the very point for which "staff" officers have been contending for years. They, too, want but one captain ; and it is absurd to suppose that chaplains and surgeons want to command vessels, or that the mere fact of their having actual rank would produce insubordination. "The object of all rank," says General Sherman, "is not so much to confer power and honor as to fix responsibility;" hence the necessity of an appropriate, actual rank for the staff of the navy, and a legal status which will protect them against the presumption that rank means power and a naval command.—*Boston Daily Advertiser.*

From a very valuable lecture on some points in the Clinical History and Pathogeny of Locomotor Ataxy, read before the Medical Society of the County of New York, Jan. 3d, 1870, by Meredith Clymer, M.D., we make the following extracts. The lecture is published in the New York *Medical Record.*

"The name locomotor ataxy is not a happy one; it sets forth a single objective symptom—motorial incoördination—which is not prominent, even if present, in the early stages, and is not proper to this disease, for it is met with in many other and very various affections. * * * *

"Let me briefly define motorial ataxy or asynergia:—A centric nervous disease, manifested by certain sensory and motory disorders, as: sight-troubles, transitory or permanent; sudden violent darting, or tearing, or burning, or boring pains, most often in the lower limbs, with other perversions of sensation; impaired adjustment in the several groups of muscles which naturally work harmoniously together in such acts as standing, walking, and handling; muscular power often but slightly lessened; sexual appetite and ability frequently impaired or abolished; nearly always progressive in its course; the anatomical characters being sclerosis of the posterior columns, disintegration of the gray substance of the posterior cornua, of the spinal cord, with atrophy of the posterior nerve-roots, and sometimes structural change in the cranial nerves, chiefly the second, third and sixth.

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"My own observations have led me to believe that there is a *formative stage* of the disease, betokened by certain symptoms, and which, so far as I know, have not been noticed by writers. They happen some time before the initial ocular disturbances, or the pain-spells, or unequivocal unsteadiness of gait, or indeed any of the symptoms usually attributed to the outset of the malady, and are mostly shown in the upper segments of the body. They consist of slight motory deficiencies and sensory annoyances, both often so insignificant as to escape the attention of their subject or his intimates. There will be awkwardness in handling small objects, as picking up a pin, or match, or putting a lead in a pencil, or tying a knot, fastening a cravat; the fingers are clumsy and not alert; things are not grasped, held, and taken up with wonted nimbleness and dexterity; they are no sooner seized and lifted than they are dropped; unpleasant sensations are felt in the skin of the face, as the tip of the nose, small areas in the temples, cheeks, lips, and are spoken of as tinglings, crawlings, as if an insect had alighted upon or was moving over the part; there may be occasional, deep-seated quiverings of the flesh, particularly in the eyelids, or lips, or cheek; a feeling of numbness, confined to a small space in one of the lips, or of being suddenly touched there by something very hot or very cold, with a tendency to fall asleep in the arms and legs, when sitting or lying down, giving the sensation of 'pins snd needles,' particularly in the fingers and toes. Some indecision in the motions of both the upper and lower extremities may exist, with occasionally a notion of their being weighted, stiffness of the joints, effort in rising from a seat, weariness after small muscular exertions, with steady aching in the nape of the neck and small of the back, and lessened sexual appetite. Neuralgia may be occasional, but the ocular disturbances are either wanting or only manifest in the form of defective visual accommodation, or contracted pupils. If experience shall confirm the constancy of an inceptive stage with certain signs, we may perhaps be able to meet this insidious disease at a period before serious structural disorganization has taken place, and successfully check its subtle advances.

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"Another source of error has lately been mentioned by Dr. Brown-Séquard. He writes: 'In ataxis, from lesions of the posterior columns of the cord, involuntary spasmodic movements are often mixed with those purely volitional, thus giving to these the appearance of as much, or even more power, as in the natural state; from which follows the assertion that there is no palsy, whilst there really is, and that too often in a notable degree.' (*Annales de Physiologie, Nor. et Path.*, t. ii. p. 761, 1819.)

"Whatever may be the value of these theories towards the solution of the complex problem of the motorial troubles in locomotor ataxy, they do not help us to a right understanding of the intimate nature of the affection. The genetic cause is still to be sought. The connection between the disorders of the cranial nerves, so frequent at the outset, and later spinal symptoms, with their relation to structural changes in the cord situally remote, without any necessary implication of the intervening nerve-tissue, has not been made out. These phenomena are certainly not accidentally coincident; they are plainly parts of the same morbid processes, whose uniting link is yet wanting. May it not be found with a better knowledge of the physiology and pathology of the sympathetic nerve? The premature senile decay of some ataxics, compared with the persistent vigorous general nutrition of others, is note-worthy, and merits investigation."

We have received the Second of a Series of Contributions from the Physiological Laboratory of Yale College. It is on the influence of Mental Activity on the Excretion of Phosphoric Acid by the Kidneys. By Luther Hodges Wood, Ph.B., M.D. We give the following portions of it:—

"The most marked result obtained in these experiments, is the *great increase* of *earthy* phosphates whenever mental activity is *diminished*. This fact is constant in the whole series. Both nervous and cerebral tissue are rich in phosphorus, and this when oxidized will yield phosphoric acid; hence, *cæteris paribus*, most phosphoric acid will be found in the blood, and consequently in the urine, when these tissues are most rapidly undergoing oxidation. From this it follows that if increased activity of the organs containing these tissues, gives rise to increased disintegration and oxidation of them, the products of this oxidation would be increased in the urine; and hence, that the total phosphoric acid would be thus increased. But on the contrary if this activity consists in a more rapid growth and less decay of these tissues, then there would be found less phosphoric acid in the urine. The total amount of phosphoric acid excreted, however, does not appear, in these experiments, to be altered by changing the mental condition, sufficiently to draw any positive conclusions; but when it is separated according to whether it is combined with alkaline or with earthy bases, we find it to be greatly varied by changing the amount of brain work. If we assume that the *alkaline* phosphates result from this metamorphosis, then, since they are increased by study, the disintegration of nervous tissue would be correspondingly *increased;* while if the *earthy* phosphates have this origin, then, as they are *diminished* under these circumstances, there must be *less* oxidation of these tissues when the mind is actively engaged. Consequently it would follow that the same law which the researches of Dr. Noyes and Dr. Parkes have shown to be true of muscular tissue, namely, that it grows during a state of active exercise, is true also of nervous tissue.

"Now, inasmuch as the alkaline phosphates are not increased in any proportion to the amount of increase of mental labor; while the earthy phosphates are diminished in a very much greater proportion by the same means; it seems probable that the latter of these hypotheses—that mental labor diminishes the amount of earthy phosphates excreted, and consequently that nervous tissue grows when in a state of activity—is the true one. * * * * *

"It will be seen, from what has been already stated, that my results do not agree with those of Dr. Hammond, though all the series here given agree well among themselves; indeed, so far as any inference can be drawn, they prove just the opposite. * * * * * * *

"It is possible that in the experiments of Hammond and of Mosler, the mental exertion was carried to the point of fatigue, which is not true of any of the experiments recorded in this paper. If that were the case, the fact would be another link in the chain of evidence that nervous tissue follows the law governing the action of muscular tissue; and that, just as the latter, as Dr. Noyes has shown, produces an increased amount of urea in the urine only when exercised beyond the point of fatigue, so the former gives under the same conditions only an increased excretion of phosphates. * * *

"The results obtained in the foregoing research may be thus summed up:—

"1. The *amount of urine* excreted varies at different periods of the day, even on a fixed diet; the day-urine exceeds the night-urine in the ratio of 3 to 2. The largest amount is excreted during the forenoon, the next largest in the afternoon, then comes that of the latter part of the night, and lastly that passed in the early part of the night.

"2. The *density* of the urine varies inversely as the amount of urine passed; the morning-urine having a higher specific gravity than that excreted at night.

"3. The *total amount of solids* excreted is greater during the day than during the night by nearly 50 per cent.; thus showing that the density is not diminished in proportion to the amount of urine passed.

"4. The *reaction* of the day-urine is uniformly alkaline, that of the night-urine acid; while, however, acid urine is excreted during both periods of the night, it is the morning-urine only that is alkaline, that of the afternoon being acid.

"5. The total *phosphoric acid* excreted per hour on an ordinary diet, is largest during the day, rising highest after the principal meal; while on a fixed diet, the excretion is greater at night, the maximum being reached during the first half of the night, the amount diminishing in the afternoon; it is less still at 7 A.M. and least at 1 P.M.

"6. The *alkaline phosphates*, when an ordinary diet is taken, are greater by day than by night; on a fixed diet the reverse is true.

"7. The *earthy phosphates*, on the other hand, are largest in amount during the day, both on ordinary and fixed diets.

"8. The *total phosphoric acid* is very greatly affected by the amount and kind of food taken.

"9. The *variations* in the amount of phosphoric acid, considered as a whole, are not sufficient to afford any indication of the previous mental condition.

"10. The *alkaline phosphates* are only *slightly increased* on increasing the amount of mental labor.

"11. The *earthy phosphates* are *diminished* under the same conditions, by an amount varying from 20 to 40 per cent.

"12. *No such increase of phosphoric acid* as would be required by the theory of the disintegration of nervous tissue during action, was observed in these experiments.

"13. The *alkalinity* of the day-urine is not due to the presence of alkaline phosphates in excess.

"The results given in figures in the tables, are plotted in a series of nine diagrams appended to this thesis. They are intended to illustrate more clearly all the variations in the excretion of phosphoric acid—whether considered as a whole, or divided according to its combination with alkaline and earthy bases—which I have observed as a result of my analyses."

DEATHS FROM CHLOROFORM.

The Death from Chloroform in Brooklyn, N. Y., reported in the Journal of 3d inst.

Mr. Editor,—The paragraph copied into the Journal of the 3d inst., from the *Boston Post* of the 21st ult., concerning the recent death by chloroform in Brooklyn, N. Y., does not give a correct idea of the case. The woman did not take chloroform of her own accord to allay pain, but it was administered to her by the physicians of the Flatbush Avenue Dispensary to facilitate the reduction of a dislocated shoulder. The physicians testified before the coroner's inquest that not more than two drachms of chloroform was administered; that the "deceased was a stout woman and with good color"; that she came under the influence of the anæsthetic most kindly, but ceased to breathe very shortly after. The husband, then, did not inflict "injuries which led to her death," but she died, according to the testimony of sworn medical men, from the effect of chloroform. The jury, however, returned the verdict that the deceased came to her death while under *medical treatment* from organic disease of the heart, and from no *other cause*. This verdict was probably based upon the fact that the physician who made the autopsy testified that the "heart was large and flabby"! E. B. Harvey, M.D.

Westboro', March 5, 1870.

The Commencement of the Massachusetts Medical College took place yesterday under most favorable auspices. In addition to the usual attractions of the Anatomical Museum, visitors were greatly interested in a collection, large in number, of dissections of the internal ear, made by Dr. Clarence J. Blake, of the class of 1864. "Very admirable" was the term freely accorded to these preparations by those whose good opinion is most of all desirable.

President Eliot, in academic robes, led the way to the Audience Hall, attended by the Rev. Dr. Peabody, and followed by the Overseers of the College, the Faculty and invited guests. In the small but select procession was the Hon. Charles F. Adams, Rev. Dr. Neale, Dr. Tyler, Superintendent of the McLean Asylum; Dr. H. I. Bowditch, President, and Dr. George Derby, Secretary of the State Board of Health, Dr. John Bacon, and other gentlemen of note.

On the side of the Hall was conspicuous, a marble tablet, enclosed in a chaste black-walnut frame, and bearing this inscription:

"In Memory of the Graduates and

Members of the Medical School of Harvard University, who fell in the Army and Navy of the United States during the War of the Rebellion.

Erected by the Class of 1869–70.

John Lawrence Fox,
Chas. Henry Wheelwright,
Francis Miller McLellan,
Samuel Lee Bigelow,
Edward Hutchinson Robbins Revere,
William Henry Heath,
Samuel Foster Haven,
Robert Ware,
Lucius Manlius Sargent,
Ira Wilson Bragg,
John Edward Hill,
Dixi Crosby Hoyt,
Henry Sylvanus Plympton,
Edward Bromfield Mason,
John Fletcher Stevenson,
William Borrowe Gibson,
Neil K. Gunn,
James Wightman,
Eugene Patterson Robbins,
Henry Livingston Dearing,
Nathaniel Bowditch."

The following was the Order of Exercises:—Prayer, by Rev. Professor Andrew P. Peabody, D.D., LL.D. Dissertations, selected for Public Reading:—1. Lead Poisoning, Horace Stanwood Everett, Newton, Mass.; 2. Aphasia, Richard Cranch Greenleaf, Boston, Mass.; 3. Cleft Palate, Thomas Wilson Hogue, Edinburgh, Scotland; 4. Alcohol, Henry Mitchell Keyes, New York; 5. Abscess of the Prostate, Norman Perkins Quint, So. Malden, Mass.; 6. Diabetes Mellitus, George Hill Smith, Truro, N. S. Conferring of the Medical and Dental Degrees, by Chas. W. Eliot, LL.D., President. Address, by Rev. Prof. Andrew P. Peabody, D.D., LL.D. Benediction.

The dissertations were highly creditable to the young men who delivered them, and to their instructors.

It was a privilege to listen to the address of Dr. Peabody. It was sound, learned and searching, and while studiously avoiding the character of a homily, appealed to the highest aspirations. The following passages, taken here and there, especially struck our attention:—

Formerly, he said, physicians often did more harm with their medicines than did disease; as firemen frequently work more damage with water than the element they combat is capable of. * * * * In describing what physicians ought to be, he said it is more important what you *are* than what you *know*. * * * If in mind and in heart, in quality as well as quantity of being, you are worthy of your calling, your very presence will be a source of healing. * * * The accomplished scholar of to-day will, if he rest satisfied with his present attainments, be an ignoramus five years hence. * * * The man who confines his thoughts to one object of mental pursuit will find the range of his ideas following, not even a returning circle but a spiral growing constantly less, and not *beautifully* so. * * * In his inculcation of the necessity of culture of mind, of heart, and of manners, he said that without these, doctors would eventually be treated like the *leech*, which by an ungraceful metonymy had once been made to designate our profession—loathed, used, and then cast away.

Alluding, toward the close, to the want of additional accommodation at the College, Dr. Peabody said the fault was with the instructors, and the difficulty would be removed by superseding them with inferior men.

The following is a list of the members of the graduating class, with their residences and theses:—

Bearsto, Peter McNutt, *Malpeque, P. E. I.* Inflammation.
Blood, Robert Allen, *George's Mills, N. H.* Pulmonary Tuberculosis.
Brigham, Charles Brooks, *Boston*, Diabetes Mellitus.
Brown, James Raymond, *Summerside, P. E. I.* Scarlatina.
Bushee, James Anson, *E. Boston*, Physiology of the Human Blood.
Cahill, George, *Boston*, Diseases of Children.
Caldwell, Arthur Brooks, *Loudoun, Va.* Neuræsthenia.
Childs, Henry Edward, *Hartford, Conn.* What is the proper time to give Medicines.
Carver, Rufus Herbert, *Taunton*, Vomiting in Pregnancy.
Dakin, Robert Augustus, *Halifax, N. S.* Yellow Fever.
Emery, William Henry, *Boston Highlands*, Alcoholismus.
Everett, Horace Stanwood, *Newton*, Lead Poisoning.
Greenleaf, Richard Cranch, *Boston*, Aphasia.
Guzman, Carlos Constantine, *Central America*, Asiatic Cholera.
Gavin, Patrick Freebern, *Dublin, Ireland*, Leucocythemia.
Hitchcock, Alfred Owen, *Fitchburg*, Pneumonia.
Jones, Miles Benjamin, *Otis*, Regimen of the Sick room.
Kendall, Francis Marshall, *Boston*, Penetrating wound of the Abdomen.
Keyes, Henry Mitchell, *New York*, Alcohol.
Landry, Alexandre Pierre, *Clara, N. S.* The Blood.
Leavett, Erasmus Darwin, *Boston*, Embolism.
Milsom, Thomas, *Halifax, N. S.* Pulmonary Tuberculosis.
Moffett, Frank Tifft, *Littleton, N. H.* Pathology of Diabetes.
Meacom, John Francis, *Beverly*, Sleep.
McCarthy, Jeremiah Joseph, *Charlestown*, Hysteria.
Morse, Edward Gilead, *Boston Highlands*, Hip Disease.
Page, Charles Whitney, *Fitchburg*, Heat.
Quint, Norman Perkins, *So. Malden*, Abscess of the Prostate.
Shannon, James Griswold, *Boston*, Acute Lobar Pneumonitis.
Simpson, John Henry, *Boston*, Scarlet Fever.
Smith, George Hill, *Truro, N. S.* Diabetes Mellitus.
Smith, Herbert, *Truro, N. S.* Acute Peritonitis.
Smith, Roscoe, *Peru, Me.*, Acute Lobar Pneumonitis.

Stanley, George Henry, *Slatersville, R. I.* Anæmia.
Stevens, Charles Wistar, *Charlestown*, Lipothamy.
Stevens, George Beckwith, *Castine, Me.* Pyæmia after Surgical Operations.
Stackpole, George Edmund, *Boston*, Melancholia.
Tupper, Augustus Maclauchlan, *Woodstock, N. B.* Typhoid Fever.
Wade, John Roger, *Digby, N. S.* Diphtheria.

Members of the Graduating Class in Dental Medicine.

Codman, John Thomas, *Boston*, Value of Nerves in Teeth.
Davis, William Francis, *Westfield Mass.* Orthodontia.
Grant, George Franklin, *Oswego, N. Y.* Chemistry of the Mouth.
Ham, Samuel Franklin, *Boston*, Manufacture of Porcelain Teeth.
Harrington, Daniel Grout, *Boston*, Inflammation.
Hogue, Thomas Wilson, *Edinburgh, Scotland*, Treatment of Congenital Cleft Palate.
Loveland, Timothy Otis, *Chatham, Mass.* Development of the Teeth.
Noyes, William Henry, *Newburyport*, Prevention of Caries.
Parmele, George Luther, M.D., *Hartford, Ct.* Epithelioma.
Thornton, William Henry, *Providence, R. I.* Extraction of Teeth.
Ward, Frank Edward, *New Bedford*, Artificial Dentures.
Wilson, Charles, *Orleans*, Neuralgia.

SMALLPOX IN A WORKHOUSE.—Dr. Macaulay, the Medical Officer of the Brentford Union, stated in his report of the last week that a tramp suffering from smallpox had been admitted into the Workhouse Infirmary from a common lodging-house, there being no less than 135 patients in the ward at the time. Two days after his admission the disease was communicated to two patients in the ward, and day after day fresh cases broke out. An old man named Barnes, who was under treatment for a broken leg, was attacked with the disease, and died two days afterwards. There are now thirteen bad cases, and others are sickening. In addition to this, relapsing fever has appeared in the house, which contains in all 600 persons.—*London Medical Times and Gazette.*

ERRATA.—In Prof. Greene's article on Reduction of Dislocations, in last week's JOURNAL, on page 154, first column, 28th line, for "displacement" read *displacements;* same column, 37th line, for "1858" read 1853; same column, 53d line, for "luxation" read *luxations.* Same page, 2d column, 50th line, for "Lowell" read *Lovell.* On page 156, 2d column, 44th line, for "blade guides forward" read *blade glides forward.* On page 158, 2d column, midway, after "and manipulations in accordance with them," substitute comma for period. On page 159, 2d column, in the sentence "abduct and evert the limb generally, carrying it backward," punctuate thus: *abduct and evert the limb, generally carrying it backward.* On page 161, 2d column, 13th line, substitute comma for semicolon after "Y ligament," and omit comma after "that is."

THOSE of our readers who have not yet supplied themselves with a pocket manual for the current year, can be furnished from this office with that of the Drs. Elmer, published by Townsend, of New York, and not inferior to either of the other works of the kind. By referring to the advertisement, it will be seen that copies are sent by mail, postage pre-paid.

TO CORRESPONDENTS.—Communications accepted:—Criticism on Cases of Diphtheria.

BOOKS AND PAMPHLETS RECEIVED.—New System of Ventilation which has been thoroughly tested under the patronage of many distinguished persons, being adapted to Parlors, Dining and Sleeping Rooms, Kitchens, &c. &c. A Book for the Household. Third Edition. By Henry A. Gouge. New York. Pp. 176.—A Practical Treatise on the Diseases of Children. By J. Forsyth Meigs, M.D., and William Pepper, M.D. Philadelphia: Lindsay & Blakiston. Pp. 921.—Excision of the Entire Scapula, with preservation of a useful Arm. By M. Schuppert, M.D., New Orleans. With Photographic Illustrations. Pp. 4.—New Facts and Remarks concerning Idiocy, being a Lecture delivered before the New York Medical Journal Association, Oct. 15, 1869, by Edward Seguin, M.D. Pp. 48.—Mémoire sur quelques Phénomenes Nerveux Sympathiques qui se produisent pendant l'Inflammation Aigue de la Membrane du Tympan, &c. Par M. Bonnafont, Paris.—Histoire de deux Têtes d'Arabes décapités. Par le Docteur Bonnafont, Paris.—Third Annual Report of the Board of Trustees and Officers of the Minnesota Hospital for the Insane, to the Governor of Minnesota, for the year ending Nov. 30, 1869. Pp. 40.—Relaxation of the Pelvic Symphyses during Pregnancy and Parturition. By Frederick G. Snelling, M.D. New York. Pp. 36.

DIED,—In this city, March 4th, Dr. John A. Cummings, aged 53 years.—At Concord, N. H., March 2d, Dr. E. G. Moore.—In Providence, R. I., March 8th, Dr. Lewis L. Miller, for more than forty years a leading physician and surgeon of that city.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending Feb. 26, 1870.

Cities and towns.	Number of deaths in each place.	PREVALENT DISEASES. Consumption.	Pneumonia.	Scar. Fev.	Measles.
Boston	120	23	12	8	2
Charlestown	3	1	1	0	0
Worcester . .	15	3	2	0	1
Lowell	23	4	2	1	4
Milford . . .	5	0	1	0	1
Chelsea . . .	7	1	0	3	1
Cambridge .	9	2	1	0	0
Salem	9	2	1	0	1
Lawrence . . .	7	4	0	0	0
Springfield .	6	0	3	0	0
Lynn	5	0	0	0	0
Pittsfield . .	5	2	1	0	0
Gloucester .	3	1	1	0	0
Taunton . .	9	5	0	3	0
Newburyport	5	1	1	0	0
Fall River .	12	1	3	0	0
Haverhill . .	3	1	0	0	0
	246	51	29	15	10

In all the above-named places there were four deaths from diphtheria and croup, and four from typhoid fever.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending March 5, 120. Males, 64—Females, 56.—Accident, 2—anæmia, 1 apoplexy, 1—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 1—inflammation of the brain, 1—bronchitis, 4—burns, 6—cancer, 4—canker, 1—consumption, 23—convulsions, 4—croup, 1—debility, 1—diphtheria, 1—dropsy, 6—dropsy of the brain, 4—erysipelas, 1—scarlet fever, 8—typhoid fever, 2—gastritis, 2—hæmorrhage, 1—disease of the heart, 2—intemperance, 3—disease of the kidneys, 3—congestion of the lungs, 3—inflammation of the lungs, 9—marasmus, 3—measles, 2—old age, 3—paralysis, 1—premature birth, 2—disease of the prostate gland, 1—puerperal disease, 1—scrofula, 3—stricture of urethra, 1—syphilis, 1—unknown, 5.

Under 5 years of age, 40—between 5 and 20 years, 7—between 20 and 40 years, 36—between 40 and 60 years, 18—above 60 years, 19. Born in the United States, 80—Ireland, 32—other places, 8.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

CASE OF CHRONIC GASTRIC ULCER.

By J. B. Treadwell, M.D. Read before the Suffolk District Medical Society, January 29, 1870.

A. G., æt. 52, by occupation a mason; of medium size, but rather spare habit. Health generally good. When young, and until within a few years, was in straitened circumstances and was obliged to subsist upon a very insufficient diet, consisting almost entirely of farinaceous substances; notwithstanding this, however, he has generally maintained a fair state of flesh and health.

During the last two years he has suffered almost constantly from severe pain in the epigastric region, which became much more intense during the last three months of his life. So severe was this pain that, during the period last mentioned, it was necessary to keep him constantly under the influence of morphia, which was administered by subcutaneous injection. He had about three hundred injections during this time, and the largest amount injected during any one day was between seven and eight grains.

At 4, A.M., Saturday, Dec. 11, without known cause, the pain suddenly became perfectly agonizing—so intense that opiates in any form and quantity failed to relieve it, and continued so until 10, A.M., Dec. 14, when he died, apparently of exhaustion from the pain.

Autopsy, 22 hours after death. Body rather thin, but in very fair condition of flesh; slight rigor mortis.

Upon opening the abdomen, dark-colored fluid was seen issuing from an irregular circular opening, about four lines in diameter, situated in the lesser curvature of the stomach near the cardiac orifice.

The stomach and other organs and tissues in the vicinity were firmly bound together by thick and extensive adhesions, apparently of long existence. The peritoneal covering of the stomach for some distance around the perforation was, however, free from adhesions. The abdominal cavity contained about ℥xxx. of thick flocculent serum. There were some slight recent deposits of lymph in the upper part of the abdominal cavity.

Upon opening the stomach it was found to contain about ℥x. of dark brown fluid, similar to that seen escaping through the perforation into the abdominal cavity. In the lesser curvature directly at the cardiac orifice was found an ulcer of ovoid form, measuring 2¼ inches in its long by 1½ inches in its transverse diameter. This ulcer involved all the coats of the stomach except the peritoneal, in almost its entire extent, and the latter was perforated at one point as before stated.

The edges of the ulcer were thickened in some places to the extent of four lines, abrupt, and almost perpendicular to the base, although in some parts cicatrized.

The stomach otherwise was apparently healthy.

The liver was about one-third larger than usual, of a light yellow color, and in a state of fatty degeneration.

The spleen was one-half less than the normal size, its capsule was wrinkled and corrugated, and the connective tissue of the interior of the organ had the appearance of being greatly hypertrophied; this, however, was probably due to the contracted condition of the organ.

The kidneys were rather under the normal size and their capsules abnormally adherent; the cortical substance of a pale yellow color, very soft and friable; the pyramids indistinct in outline, and in the whole organs in a condition of fatty degeneration.

The other abdominal organs were healthy.

At the extreme apex of each lung there was a thickened and opaque patch of pleura about ten lines in diameter, perfectly symmetrical, and without any change in the subjacent pulmonary substance or costal pleuræ.

The heart was rather small and flaccid, but apparently normal in other respects.

The only symptom in this case that was of any value in diagnosticating the disease was the pain, severe and constant, which was quite characteristic of the lesion. But on the other hand the fact that it was not aggravated by the taking of food, and the additional fact that the patient suffered from severe attacks of neuralgic pain in other parts of the body, particularly about the head and face, would naturally lead to the supposition that the epigastric pain was of the same nature, and thus its importance as a diagnostic symptom would in a measure be overlooked.

There was never any vomiting of blood, and with one exception, there was no vomiting whatever throughout the entire duration of the disease; and upon this occasion, which was about a month previous to his death, it was only very slight, and probably entirely irrespective of the lesion. The absence of this symptom, however, is explained by the special anatomical seat of the ulceration.

The absence of increased pain upon taking food into the stomach is also explained in the same way.

The absence of marked emaciation so common in this disease when the lesion is of long duration, is also due to the special site of the ulceration, which was such as to occasion but very slight interference with the performance of the physiological functions of the stomach, and also to the absence of vomiting which was due to the same circumstance.

There was, however, constipation alternating with diarrhœa—the attacks of the latter, however, always being slight—a combination of symptoms very common in cases of this kind. The constipation is generally thought to be due to lack of ingestion of a proper amount of solid food, and the diarrhœa to imperfect digestion of that which is taken; this, however, does not seem to have been the cause of these symptoms in this case, as a fair quantity of solid food was habitually taken, and the absence of marked emaciation is pretty good evidence that it was tolerably well digested and assimilated.

It has been thought that persons who for long periods have been deprived of suitable food, are specially liable to become the subjects of this lesion, and this case, so far as it goes, is confirmatory of that view.

It would be an interesting point to decide whether the degenerated structural condition of the liver and kidneys in this case, was due directly to deficient nutrition consequent upon the lesion existing in the stomach; and also whether the contracted and atrophied condition of the spleen was due directly to the same cause, or to the lack of its proper amount of work as a blood-making organ from insufficient supply of blood-making material, the latter deficiency being due to a certain amount of interference of the ulceration with the performance of the functions of the stomach, or to both.

VACCINATION.

By a Searcher for Light.

Speaking of smallpox, says the report of a committee on the subject to the American Social Science Association, in October, 1869:—

"Thus, both these nations have come into the possession of a principle which really lies at the foundation of the modern practice of vaccination, namely, that a mild form of the disease will preserve from a second attack, just as surely as a severe form. By artificial implantation the smallpox poison is introduced into the system, and, *once for all, the susceptibility of the system to smallpox is excited and exhausted.* How this takes place is not understood. *But vaccination will do the very same thing,* as far as the essential is concerned; *that is, it will exhaust the capacity of the system for having the smallpox.*" Page 2.

After this, what do the committee intend shall be understood by the statement on page 7? "Some persons have smallpox twice; and some have it after a thorough vaccination." And what do they mean by the following table on page 9?

Classification of patients affected with smallpox.	Number of deaths per cent. in each class respectively.
"3. Vaccinated:—	
a. Having 1 vaccine cicatrix, - - -	7·73
b. " 2 vaccine cicatrices - - -	4·70
c. " 3 " " - - -	1·95
d. " 4 or more vaccine cicatrices -	0·55
I. Having well-marked cicatrices - -	2·52
II. Having badly marked cicatrices - -	8·82
"4. Having previously had smallpox - -	19·00"

Again, on page 7, we read in Italics:—"*For when a person is once vaccinated, though poorly, it becomes difficult or impossible to vaccinate him properly*"; and they go on to say: "Nevertheless, if the first result is unsatisfactory, let the trial be repeated as soon as convenient, and as often as may be required, until a satisfactory result is attained." With their faith in the *impossibility,* how long a time, and how many vaccinations would be required before "a satisfactory result is attained"?

Again the report says:—

"The lymph direct from the cow sometimes occasions troublesome, even dangerous, inflammation and fever. It does not produce any better vesicles than those from humanized lymph, and it is much harder to make it take." Page 7.

The writer can see no evidence of this first fact, in the statement, if it be a fact. He has known of several deaths from vaccination, and knows that they were in cases of *re*-vaccination. He has very good reason for believing that the lymph was humanized, and in one case of the very best quality.

The second fact he knows nothing of, but would like to see the evidence.

On pages 6 and 7, we read:—

"In vaccinating from the cow or from a child, lymph ought not to be taken from any but a perfect vesicle. *No blood must be mingled with it.* The lymph is best taken on the day-week of the vaccination, but may be drawn sooner; if later, it is of very uncertain quality."

About the blood as spoken of above—why? Is there any proof of other disease being communicated by it, or is it a matter of theory alone? As to the latter statement, about the age of the lymph, the meaning of the sentence is a little obscure. A scab of the writer's selection, in which the lymph is several months old, has never failed to produce what the report would call "perfect vesicles."

There are a few more paragraphs, which the committee have failed to explain.

"How do we know that vaccinations are becoming less efficacious? This is inferred chiefly from the great number of instances in which revaccination is successful. *But does this success prove that the individuals concerned were liable to an attack of smallpox? We think not.* We just now quoted the instances of the armies of Great Britain and Würtemberg. Here several thousand men were revaccinated, and the operation was about as successful upon those who had had the smallpox as upon those who had only been vaccinated previously. In a very large number—about one third of each class—the revaccination was completely successful. This shows merely that a protected person—one not liable to take smallpox—can sometimes be revaccinated with success." Page 13.

By going back to page 10, we read:—

"In the Prussian army revaccination has been performed upon every recruit since 1833; the result being that the annual deaths from smallpox (which at one time previously were 104) have not averaged more than 2.

"In the Bavarian army revaccination has been compulsory since 1843. From that date till 1857, not even a single case of unmodified smallpox occurred, nor a single death from smallpox.

"Similar good results have followed the institution of revaccination in the armies of of Great Britain, Denmark, Sweden and Baden."

Selected Papers.

BROKEN RIBS IN THE INSANE.

That recent revelations as to the occurrence of extensive fractures of the ribs in the insane is a matter to be lightly passed by, no one will, we think, affirm. To the public they are of interest, as they refer to relations or acquaintances, certainly to fellow creatures, confined for the public benefit; for the vast majority of the insane are in a hopeless condition as to recovery, and are kept in confinement partly for their own sake, but more for that of the public generally, as we point out elsewhere. To our own Profession there is the scientific interest which cannot be separated even from such miserable occurrencs, whilst to that portion of our brethren to whose care the insane are intrusted, it is matter of moment not only that they should have a clear conscience, but that their reputation should be unspotted before the world. To these men as a class, the writings of Mr. Charles Reade have done much injury and grave injustice, and not the least has been done by his last communication to the *Pall-Mall Gazette*. *Apropos* to that letter, Dr. Sankey has communicated to us a paper on the subject of broken ribs which has the merit of bringing matters to a definite issue, and on which, as on the subject generally, we shall make some comments.

The first point to be noted is the great extent of these fractures, and to account for this Mr. Charles Reade charitably suggests that they are produced by an attendant travelling on his hands and knees up and down the unfortunate individual's chest. Against such a solution we are bound to protest, in the first place, because the cause as pointed out by Dr. Sankey is inadequate, and, in the second, because there is not a tittle of evidence to support a charge of such exceeding gravity. Then, again, the fractures have only been discovered after death. The why and wherefore of this are well pointed out by Dr. Sankey, and we need do no more than corroborate his statement that many of the insane are utterly careless as to their bodily sensations, and will even give no information as to what they feel or suffer.

Again, these injuries have occurred in *men, soon after or before admission, and whilst they have been laboring under great excitement.* Dr. Sankey would seek to account for the first of these facts by a second —that the general paralysis of the insane, with which alone he appears to connect these accidents, is far more common in men than in women; but it appears to us that there is still another consideration. Female patients are more frequently mischievous than dangerous, and are perhaps more easily controlled by physical force than are men. Now, without accepting the doctrine that the bones of the paralyzed or the insane generally are more fragile than are those of the majority of healthy individuals (that they are so in certain instances has been clearly shown), or even that advanced by Dr. Sankey—that it is the nervous element of muscular motion which is defective, we think something may be made out of the above three facts taken collectively. The unfortunate patients have been men laboring under strong excitement, ready to fight with their attendants on the slightest cause, or even no cause at all. Some control is absolutely necessary in these as in other kinds of cases, and moral control over men in such a state of mind is simply an absurdity. Accepting Dr. Sankey's view that such patients are general paralytics [there being paralysis of sensation as well as motion], at this stage of their complaint, their notions are of the most exalted kind, they fancy themselves infinitely superior to those by whom they are surrounded, and any attempt to impose the will of another upon them is resented as a deady insult. Under such circumstancs, a collision is inevitable; the *ultima ratio*, physical force, must be called in, and a struggle ensues, to be continued until the maniac is utterly overpowered or completely exhausted. As we take it, it is in such conflicts that ribs are broken, and that the accident does not depend on the inhumanity or insensibility of madhouse attendants is shown by the fact that patients are *brought* to the asylums with ribs already fractured. It appears to us that the position of these men is not sufficiently taken into account. That their ranks do contain black sheep, it would be useless to deny; but, as a rule, they are carefully selected. But they are men, and a sudden blow in the face, a kick with a heavy boot, or even to have their face spat in, would rouse most people not being attendants. And what kind of patients have they under them? Some of them, knowing that they are insane, and that the law no longer takes cognizance of them, have sworn to commit murder on the first opportunity, and when they think that opportunity has come a struggle ensues, for life on the one part, for superiority on the other. This is no overdrawn picture, as those familiar with asylums know. These are not the class of cases above alluded to as recently admitted, it is true, but they are analogous.

It is useless to talk of such men as amenable to reason; they are amenable only to brute force, active or passive, and over some of them even drugs would seem to lose control. They may be held on the floor or on their beds, so as to be incapable of striking or kicking, and even then they will bite, as many a physician and attendant know to their cost. Such men must be hindered from injuring themselves and others; the question is, How? Force of some kind must be used, active or passive. With six or eight attendants holding a man, and this number is sometimes necessary, it is impossible that he should escape bruising, even should he suffer no more serious injury. In such a case, the *argumentum ad hominem*, usually most unfair, becomes good logic, whether should we prefer to be so held by six or eight men, with their localized grips, or by a stout sheet of canvass uniformly resistent? For our own part, we should, being sane, choose the latter.

Now, it is equally absurd to call this the introduction of restraint as a system, as to call the present system that of absolute non-restraint. In exceptional cases force of some kind must be used; the only question is how best to apply it. We have as little desire to return to the condition of things so well described by Dr. Gardner Hill,* in a recent work, as to set open the doors of our goals and lunatic asylums, and to let their inmates go free. Neither will we accept the position of advocates for a system of restraint. Force is now used, we contend, not in the best way; and this is not the opinion of men unacquainted with lunacy practice, but of some of those who have devoted much time and attention to the subject. We are in a similar position with regard to bloodletting. With a bound, practice leaped from one pole to the other, universal depletion gave way to universal stimulation, and we are now slowly and carefully trying back, so to speak, endeavoring to find out cases where bloodletting does good. We are constantly encountering papers in our journals where the one point of interest is that venesection was had recourse to with or without benefit. It has been the same in lunacy practice; from all the horrors of the old system, the step to non-restraint was sudden and complete. If there are men now who advocate mechanical appliances instead of living force in avowedly exceptional cases, are they to be called advocates of a *system* of restraint, any more than are the physicians above alluded to, to be dubbed followers of the Sangrado school? In no instance ought restraint to be had recourse to, without the direct permission or instruction of the medical superintendent; neither in any case ought the patient under restraint to be left to himself by his attendants. It is useless to argue, as does Dr. Gardner Hill, that the application of a strait jacket implies a struggle. No doubt it does in certain cases, but it is not a struggle prolonged for hours, as under the existing system, and it is exactly for such cases that we claim the advantages of mechanical over active restraint. Restraint does exist now in the shape of padded rooms and attendants' hands; why no other forms should be used we are at a loss to see.

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* "Lunacy, its Past and Present." By Robert Gardner Hill, L.R.C.P., M.R.C.S.E., &c. London: Longmans. Pp. 109.

But there is another matter alluded to by Dr. Sankey, of at least equal importance. The medical staff of our large asylums is utterly inadequate to the harassing duties they have to perform; and further, those who have most of the work to do are underpaid. Until these matters are remedied reform is hopeless.—*London Medical Times and Gazette.*

ON DUST AND HAZE.

By Professor Tyndall, LL.D., F.R.S., M.R.I.

The learned professor began his lecture before the Royal Institution of Great Britain, by stating that a sunbeam on entering a dark room becomes visible by illuminating the particles of dust floating therein. A beam of powerful light, such as that of the electric lamp, will prove the existence of these floating particles in the air of this room, or, indeed, in that of any other, even of the best-ordered drawing-room in London, although they are invisible by the light of ordinary candles or gas. Some months ago, when he was engaged in a course of experiments on the action of light upon various vapors, he found this dust exceedingly troublesome. The air was wholly loaded with it, and although in his experiments it was of great importance to have the air entirely free from it, it became a matter of considerable difficulty to get rid of it. An "experimental tube" was filled with air which had been passed through tubes containing fragments of glass wetted with concentrated sulphuric acid, and marble wetted with a strong solution of caustic potash; but although the air was thoroughly dried by this means, the particles of dirt were carried along with it, and a beam of light passed through the tube discovered them in quantities as great as in common air. But it was found that by passing the air over a flame before letting it enter the drying tubes, every particle of dust was destroyed, and the beam of light passed through the "experimental tube" was *invisible*, owing to the absence of any illuminated particles. What did this prove? It showed, to his own astonishment, that this floating dust consisted of particles of combustible, and therefore organic matter—that the air which constantly surrounds us, which we are continually breathing, is loaded with living organisms, which are of necessity constantly passing into our lungs—that the dirt of the air of London is organic, and not, as he had supposed, of the same nature as the sand of the desert of Sahara, inorganic, incombustible. To make this matter quite certain, Mr. Valentin, of the Royal College of Chemistry, constructed for him a gas furnace, so arranged as to heat a platinum tube and a roll of platinum gauze; the air was made to pass through this tube and gauze, so as to insure the contact of the dust with the hot metal, and the result is given by the following table:—

Quantity of air.	State of platinum tube.	State of experimental tube.
15 inches.	Cold.	Full of particles.
"	Red hot.	Optically empty.
"	Cold.	Full of particles.
"	Red hot.	Optically empty.
"	Cold.	Full of particles.
"	Red hot.	Optically empty.

That is to say, when the air was passed *cold* into the experimental tube, the floating particles were not destroyed, and passed along with the air; but when the particles were consumed by the hot platinum, the experimental tube was "optically empty," there being no floating dust in it for the beam of light to illuminate.

The following table gives the results of experiments in which the air was allowed to pass into the experimental tube under various conditions of speed and temperature :—

Quantity of air.	State of platinum tube.	State of experimental tube.
15 inches, *slow.*	Cold.	Full of particles.
“ “	Red hot.	Optically empty.
“ *quick.*	Red hot.	A blue cloud.
“ “	Intensely hot.	A fine blue cloud.

The cloud which appeared in the experimental tube when the air was passed quickly through the platinum was the smoke of the particles burned in the furnace. He had failed in his attempts to burn the particles in the open air by intense heat, but a flame of a spirit lamp held immediately under the electric beam gave a result which caused him the most intense astonishment. In common with every chemist he had hitherto considered the flame of a spirit lamp to be entirely smokeless. What, then, was his surprise to find that, on holding the flame under the beam, volumes of intensely black "smoke" were given off, blacker than he had ever seen issue from the funnel of a steamer! He tried several other flames; he burned spirit of wine on cotton wool; he tried the flame of a Bunsen's burner with a tall chimney, but always with the same result. Wreaths of the blackest "smoke" ascended through the beam of light, showing themselves in the distinctest manner. The question then arose—Could this blackness be smoke at all? Could no other cause be assigned to explain the phenomenon? To settle this question, he tried the flame of pure hydrogen gas, in which it was impossible that carbon could be to make real smoke. But, on this being held beneath the electric beam, the same black wreaths ascended. A mass of red-hot iron gave the same result. What, then, was this darkness which was shown to exist in cases where smoke was impossible? It was simply the darkness of stellar space—the darkness caused by the absence of organic dust, showing that pure air is dark by virtue of its own intense transparency. Nothing could demonstrate more clearly the invisibility of the medium which renders all things visible. The flame held under the beam destroys the floating particles, and a stream of pure air ascends across the horizontal beam, which, jostling aside the dust-laden air, causes a black band of pure transparent air free from illuminated dust (in appearance exactly like smoke) to take its place across the beam. But it was also discovered that it was not necessary to consume the dust in order to produce pure air. It was found that a sphere of heated copper held beneath the beam of light produced the same "smoky" appearance, and that, too, even after the temperature of the copper had fallen below that of boiling water. Upon this it was suggested that a sphere of boiling water would produce the same result, and this was found to be the case, although in a less degree. The reason of this is simple; the heated body quickly heats the air immediately surrounding it, but not the particles; the pure hot air ascends and makes its dark track across the beam, but the particles are left behind.

The learned Professor then showed that any gas, providing it was free from these floating particles of dust, would produce the same dark mark across the beam of light. He took a common glass shade, and placed it with its mouth downwards so that the beam should pass right through it from side to side. The shade being full of the air of the room, the light was of course visible all the way through it. He then introduced into the upper part of the shade, above the beam of light, a tube connected with a reservoir of hydrogen gas. The hydrogen soon filled the upper part of the shade, and, occupying more and more space as its volume increased, it speedily filled the greater part of the shade, the beam of light *in* the shade fading from the sight of the spectators as the hydrogen occupied the space traversed by it. The shade being removed, the beam of light appeared instantaneously in its place, but on the hydrogen being allowed to escape, a darkness as of a cloud of smoke passed across the beam, which immediately after its passage resumed its usual unbroken aspect. A gentlemen present seemed inclined to question the success of this experiment, but the learned Professor partially repeated it, and completely proved his point. Having then observed that any other gas—*e.g.*, common coal gas—would serve equally well for this experiment, he said that, seeing that the air we are constantly breathing is so entirely laden with these particles of organic matter, the wonder is that so small a portion of it is sometimes hurtful to human life. For some time an opinion had prevailed that contagious diseases were spread by a malaria; it was believed that matter in a state of decay entered people's bodies and produced in them conditions of decay like to its own. It was seen that the process of fermentation went on in this way, and that a little leaven leavened the whole lump. Why, then, it was asked, should we not believe that diseases propagate themselves thus? But in 1836 an answer was given to this question by the discovery of the yeast plant, and fermentation was shown to be a process of life instead of one of decay. In 1837 Schwann discovered that meat highly heated and excluded from air never putrefied. Putrefaction is, then, the result of something derived from the air, which has the power of propagating itself in the body, and must be a living organism such as the dust of the air has been shown to contain. The "germ theory" of the propagation of disease has been slowly gaining ground in the opinions of medical men, and, at a time when it was thought improbable by many of them, the President of this Institution was one of its ablest advocates. These germs floating in the air enter the human frame, and, growing there, produce various disorders. In this way the Asiatic cholera, from a small beginning in the delta of the Ganges, in seventeen years occupied nearly the whole world. And the action of these germs has its exact counterpart in another part of nature's field; for as an acorn will produce an oak bearing a crop of acorns each capable of reproducing its parent tree, and so a whole forest may spring from a single seedling, so a germ of smallpox lodged in the body will produce a crop of pustules each one capable of reproducing germs like to the original one. Medical men know well how important it is to exclude the air from abscesses when they are being operated on, and instruments are specially constructed for this purpose; yet although the pus extracted on the first operation is sweet, on the second and all other operations it is generally putrescent, and swarming with living organisms called *vibrios*. This is caused by the germs clinging to the trocar, and by it introduced into the abscess, flourishing therein under favorable conditions of temperature and food. The only way to "clean" the canula and trocar of these germs is to heat the instruments as highly as their temper will allow. It was an ascertained fact that the troublesome hay-fever was caused by these same vibrios.

Having shown that it is useless to try to blow away the dust from a beam by means of bellows, since the dust from the bellows immediately replaces that blown away, the learned Professor proceeded to experiment on the state of the human breath as it issues from the lungs. His lungs being full of the common air of the room, he breathed through a heated tube so as to cause the breath to ascend through the beam of light, at the same time preventing any cloud of condensed aqueous vapor. At first no extraordinary appearance was visible, but soon the familiar dark clouds denoting the absence of illuminated dust appeared. He contended that this showed the history of the air in the lungs as clearly as if his skin and breast bone were transparent. The air which entered the lungs at the end of taking breath, being also the first to leave them on expiration, had not had time to deposit its dirt; but the air which entered the lungs first, and left them at the end of the expiration, having deposited its dust at the bottom of the lungs, showed its freedom from floating particles by its smoke-like track across the beam. Again, he filled his lungs with air filtered through cotton wool, and, on expiration, the dark clouds were seen from beginning to end. This proves that a filter of cotton wool will exclude these particles, as might also be seen by filling the nozzle of a common bellows with lightly packed cotton wool, and directing the air across a beam of light. Instinctively acting on this principle, a medical man, on entering an infected atmosphere, places his silk handkerchief over his mouth and nostrils; and, taking this hint, Dr. Bence Jones had tried the above experiment, substituting silk for cotton wool, and had obtained substantially the same result, though in a less perfect degree. In conclusion, the learned Professor recommended the use of a respirator of cotton wool as a means of giving pure air to the lungs to all who are likely to be breathing germ-laden atmospheres; and at the present time, when London was full of scarlatina, he would recommend these respirators as the most efficient protection; and, armed by one of these, he declared his perfect willingness to enter any atmosphere, however infected it might be by scarlatina or other diseases.—*Ibid.*

Bibliographical Notices.

"*A Treatise on Intra-ocular Tumors, from original Clinical Observations and Anatomical Investigations.*" By H. KNAPP, M.D., late Professor of Ophthalmology, and Surgeon to the Ophthalmic Hospital in Heidelberg. Translated by S. COLE, M.D., of Chicago. New York: William Wood & Co.

As is well known to many in the profession, the author of this book, Dr. Knapp, left his position in Heidelberg and has settled in New York, to practise and teach Ophthalmology. He has an European reputation as an operator which is understood and recognized by his colleagues in his specialty in this country. This translation by his pupil, Dr. Cole, of his treatise on intraocular tumors, will serve to introduce him to the profession generally as a clinical observer and teacher.

As Dr. Knapp says, "the ties which indissolubly bind ophthalmology to general medicine and surgery, can scarcely be better demonstrated than by the history of tumors encountered in and about the eye." Hence the interest felt by the general surgeon in the results of careful study of the tumors within the globe or arising from it, and this all the more since on close inspection they are found to be rather limited in variety, notwithstanding the long lists heretofore devoted to ocular tumors.

Dr. Knapp engaged himself for several years in observing and collecting the appropriate cases which presented themselves, and he says:—"Were I to rely on my own observations, ocular tumors would hardly admit of more than two varieties, viz.: *glioma*, originating in the *retina*; and *sarcoma*, proceeding from the *choroid*, and being in part *unpigmented* and in part *melanotic*.

"When of long duration, especially in recidives after extirpation and in metastases, *glioma* may become sarcomatous and perhaps carcinomatous, and primary *sarcoma* may also become carcinomatous."

He gives a detailed report—clinical, macroscopical and microscopical—of his cases, and deduces the above formulæ, so to speak, from them. He says:—"In the description of disease there is no other test for correctness than the observation of cases. The truer to nature and the more careful this is, the more distinct will be the picture of the disease, the clearer will be our comprehension of processes of morbid activity, and the more certain and useful our treatment."

After having carefully studied this treatise of Dr. Knapp, we feel compelled to say that the above sentence applies especially to it, for we have not found it surpassed in faithfulness of detail and truthfulness of observation and record. In proof of what he found he gives us seventy carefully executed drawings, made by himself and lithographed in Germany, the first being a chromo-lithograph of the fundus oculi with glioma. Those familiar at all with this sort of study know how valuable and important these are; their truthfulness will be recognized in their study.

The main body of the book is made up of the description of glioma and sarcoma. He first gives the report of his cases, and then the general description, including diagnosis, prognosis and treatment. In an Appendix he gives notes on other forms of tumor occurring in the eyeball, such as sarcoma of the iris, myo-sarcoma, tubercle, syphilitic tumors, lipoma, cysts, simple melanoma, granuloma, &c.

Dr. Cole has faithfully translated this treatise into fluent and clear English, the *proof* has been carefully read—a matter of no small importance where constant references are made to various parts of the seventy figures given—and, not least, the publishers present us the work on clean, white paper, in good, large type.

Here, ordinarily, would end a journal notice of a medical treatise; but I cannot refrain from adding something more, in explanation as it were, to the readers of this Journal, of what such a work as this of Dr. Knapp means. It is the first and only thing in English of the kind. It tells us clearly and precisely what glioma and sarcoma are, and how and where they originate in the eyeball. We learn some definite rules for diagnosis, prognosis and treatment of these malignant or semi-malignant diseases; and by the method the author has taken of arranging his work we can at once take hold of the practical part when requiring hasty reference and speedy decision. Up to the time of its appearance in German we had almost Virchow alone to fall back upon, and in ophthalmology of course lacked special reference to those cases in which we needed assistance.

In a special journal, *Royal London Ophthalmic Hospital Reports*, cases of "cancer of the eyeball" had been reported by Hulke, Hutchinson, Cowell and others; these I had studied, and agree with Dr. Knapp when he says:—"Most examples of intra-ocular cancer which are mentioned in medical literature, particularly in English, I could comprise without trouble under glioma and sarcoma, and whenever I was not successful, the description was so deficient that *no other* explanation could be given."

In proof of this, Mr. Hulke himself says (*Oph. Hosp. Rep.*, vol. iii.):—"I published eleven cases under the title 'Carcinoma of the Eyeball.' Since then Virchow's valuable criticism of several of these, and a better acquaintance with the minute structure of morbid growths, have taught me that I used the title in a wider sense than a strict anatomical definition allows, and that true cancer is less common in the eye than I had thought. I mean cancer characterized by an epitheloid type of cell, an organized disposition of the cell masses, and their outbudding into and intercalation amongst the normal tissues as something added to them, and the absence of strictly intercellular substance. The morbid growths I then regarded as medullary cancers I have now little doubt were gliomas—tumors originating, according to Virchow, in the interstitial connective tissue (neuroglia) of the retina."

Even the constantly employed and ever busy doctor begins to feel, at least in our large cities, that there is lately creeping into the medical profession a sort of necessity to know something of what is going on in the scientific studies of his profession, and that the time has perhaps gone by when a tumor, or perhaps the extirpated contents of the orbit, need be simply handed over to the nearest morbid anatomist for his "report," whilst the dust accumulates on the cover of his own student's microscope. To such I would particularly recommend this treatise of Dr. Knapp, as it is so succinct, clear and truthful. The standpoint of its authority I will also explain. For instance, how does it compare with Virchow's ideas? Let me quote from Dr. Knapp's introduction. "That other varieties of tumor (especially carcinoma) may arise in the eye, I am far from denying. Only a few brief remarks of Virchow confirm the existence of true carcinoma in the eyeball. If the theoretical views of this eminent investigator, as well as those of all others, are peculiar and subjected to the change of time, certainly his analyses and descriptions of actual forms of disease have an imperishable worth, for they are perfectly true to nature. Science, as it progresses, will at some future day go beyond the discoveries of Virchow, but will not overthrow his positive results; on the contrary, will employ them as foundation for future developments. Science does not lean for support on *one* name, but is carried by hundreds."

Following the appearance of Dr. Knapp's book in German, there appeared in Græfe's *Archives of Ophthalmology* the anatomical report of eight cases of glioma of the retina by Dr. J. Hirschberg, which he observed in Græfe's clinic in Berlin. Dr. Leber reported, also, a fine specimen of "Cavernous Sarcoma of the Choroid." But what is of more importance, Prof. Græfe, who had not previously so fully concurred in Dr. Knapp's views, published a summary of his extensive experience on tumors within the eyeball. What this experience was, will be best understood when I say that Græfe had in the course of the year one hundred and fifty (150) cases of intra-ocular tumors, two thirds ($\frac{2}{3}$) of which were choroidal sarcoma and one third ($\frac{1}{3}$) retinal glioma. More than a hundred of these eyes were extirpated by Græfe, and their anatomical examination was made by Virchow, Rechlinhausen, Klebs, Cohnheim, Leber and Hirschberg. Through the physicians who sent him many of the cases, his own clinical observations, and the researches of the above-mentioned distinguished anatomists, he was able to draw up his conclusions, which, finally, are more nearly the same as Dr. Knapp arrived at than I should have been disposed to believe, since all observations must necessarily differ, had I not carefully studied them in comparison with those of our author. I wish these cotemporary observations of the several anatomists and clinical teachers had also been rendered into English by Dr. Cole and published by Dr. Knapp, either in connection with his book or in some other form, because, as he says, he found there is a general tendency in England, on the continent and here also in the United States, to further study of intra-ocular tumors, since they are there enclosed and shut off from the rest of the organism.

But still I hear some iconoclast saying to such studies and such books, *cui bono*. You must not expect us general practitioners to interest ourselves in or know about pathology. I answer simply, the ophthalmoscope shows us a commencing glioma in the retina, clinical knowledge and experience with the instrument tell us how to diagnosticate the intra-ocular growth from others, and say to us do not delay a moment in enucleating the eyeball; the microscope then confirms our diagnosis, and so far experience tells us the patient's life is saved when the glioma has not gone up through the optic nerve. A parent tells you his infant's pupil sometimes glistens like the cat's. Do not then let the old idea of cancer and death prevent your advising immediate examination or induce your advising against instant enucleation, since life may thereby be saved.

B. J. J.

Dr. Paul Schœppe has obtained a writ of error. A recent suspicion that he was a Prussian forger has been disproven, and he is now awaiting executive clemency.

Medical and Surgical Journal.

BOSTON: THURSDAY, MARCH 17, 1870.

NOTES FROM FOREIGN JOURNALS.

Extraordinary Misrepresentation.—An article in the *Archives Générales de Médecine* for February, 1870, entitled "On the Physiological Action of Chloroform and Ether considered from a Surgical Point of View," and written by one of the Editors of the *Archives*—Simon Duplay—has the following passage:—

> "Chloroform and ether have both been attended by accidents and caused death in surgical practice. The latest statistical researches show (*Soc. des Sc. Méd. de Lyon*, Aout, 1867) that their mortality balance-sheet is about alike. And as, among its other advantages, chloroform acts more quickly, produces more complete insensibility and muscular relaxation, and is more lasting in its effects, the preference which most surgeons accord to it is easily understood."

The only correct thing in this paragraph is the statement that chloroform acts more quickly than ether: though the latter acts rapidly enough for all purposes in civil practice. The declaration that the former produces more complete insensibility and muscular relaxation, and is more lasting in its effects, could only have come from one inexperienced in the use of ether, as the fact is precisely the reverse. And how much European physicians now practically know of sulphuric ether as an anæsthetic may be divined from the fact that out of 3224 patients who during a certain period were anæsthetized at the Eye Department of Guy's Hospital, only *three* of them inhaled that vapor.

But, the assertion that the *mortality* balance-sheet, as between chloroform and ether, "is about alike," is an unmitigated libel on the latter. Not having seen the paper referred to by M. Duplay, we are at a loss to account for that gentleman's flagrant error, unless his misstatement be attributable to our—satirical at first, then taciturn—controversialist, M. Giraldes. The *Gazette Hebdomadaire*—we repeat the shameful story again—reported M. Giraldes as saying that a committee of the Boston Society for Medical Improvement announced four hundred cases of death from sulphuric ether. That number would perhaps be within speaking distance of the mass of published instances of death from chloroform collected three years ago. And it may be that upon this basis the most unjust comparison between the two agents referred to by M. Duplay is founded.

The *Gazette* corrected its report of M. Giraldes's misstatement, by reducing the figures from *four hundred* to *forty-one*. But, we repeat once more, that in reply to our appeal to that gentleman that truth required him to change the figures further—and to *zero*—M. G. impertinently pointed to the report of the committee, who *investigated* forty-one cases of alleged death from sulphuric ether, and who declared that the fatal result was *not* attributable to the ether in any one of them! We challenge M. Giraldes to translate into French the statement of the committee to which he refers and put it by the side of his own declaration as it has now for two years stood before the world.

Not one death from sulphuric ether has received the general acknowledgment of scientific men. But numerous deaths have been declared to be attributable to chloroform by some of the most distinguished advocates of the employment of that, their favorite anæsthetic.

Dr. Richardson has recently estimated the proportion of deaths to chloroform administrations as 1 in 1500, or 1 in 2000.

Cohnheim's alleged Discovery again.—M. Feltz is another observer who has examined the question of Cohnheim's alleged discovery of the passage of white globules through the capillaries; and the experiments of M. F. do not confirm the theory of the latter.

Coralline, &c.—M. P. Guyot arrives at the following conclusions as to the toxical properties of certain products of the carbolic acid group. 1. Carbolic acid in its action on the skin causes symptoms of inflammation. 2. Its action is gentle when the temperature is low, but is more intense at a high temperature. 3. Rosalic acid and coralline, when pure, are not poisonous, and exert no action on the epidermis; but otherwise they are toxical. 4. Rosalic acid may act upon the skin, by virtue either of sulphuric acid or of carbolic acid contained in it, according to its mode of preparation. 5. Coralline prepared with impure rosalic acid and an excess of ammonia is poisonous when introduced into the animal economy. It then acts by means of the aniline that it contains. It has no action on the skin. 6. Prepared as in the two other cases above mentioned, coralline acts upon the skin by virtue of the carbolic acid it contains. 7. Rosalic acid may be purified by means of benzine.

[Thus would seem to be reconciled by M. Guyot the conclusions arrived at by M. Tardieu, who found a poisonous action on the skin to be exerted by coralline, while the experiments of another observer with that agent were negative in their results.]

Whooping Cough treated by Benzine.—Dr. Bottari, in *Lo Sperimentale*, says:—1. The inhalation of the gases developed in the process of purifying illuminating gas has a happy effect on whooping cough, provided that disease be free from complications. 2. It is probable that the effect is due to the benzine developed in the distillation from the coal. 3. Benzine may be administered in doses of from 10 to 20 drops a day in mucilage or syrup. It may be employed at the same time as a vapor diffused in the chamber of the patient. If the benzine be used in the first stage of whooping cough it appears to be inert; while the improvement is marked and rapid if the agent be resorted to after the first stage, provided there be no congestion of the respiratory organs.

Whooping Cough treated by Chloral.—Dr. A. Ferraud has a paper on this subject in the *Bulletin de Thérapeutique*. Dr. F. had three patients in one family with whooping cough, which he had treated unsuccessfully with various remedies. He then tried chloral, which he gave in syrup, in the proportion of 2 grammes to 150. In each spoonful of the mixture there were 25 centigrammes of chloral. The first three days two spoonfuls were prescribed for each evening, were not regularly given, and only the tolerance of the medicine was established. Then three spoonfuls were prescribed and were regularly given. Now there was an abrupt and favorable change. Instead of three or four attacks of coughing, with vomiting, in the course of each night, there was unbroken and refreshing sleep. In the morning, on awaking, there was an attack of the cough for a few days, which soon disappeared. Recovery was rapid.

Obstinate Hiccough treated with Mustard.—Dr. Juariz reports the case in the *Siglio Medico*. A Spanish physician was seized during convalescence from gastric fever with obstinate hiccough, which left him no instant of repose. For sixty hours the patient went through the list of antispasmodics, narcotics and revulsives, including ipecac. At the end of that time the patient asked his wife for a preparation of farina. By mistake, an infusion of common mustard was brought him. He swallowed a cupful at one gulp, and was surprised to find his hiccough disappear definitively. The Doctor tried the remedy on his patients, and succeeded in cases resisting other remedies. His usual dose was a tablespoonful infused in four ounces of boiling water. The reporter in the *Siglio* also met with like success in the use of the mustard infusion in three cases of hiccough of several days' standing.

[In these days of skepticism as to the powers of drugs, it would perhaps be an act of temerity to say that mustard would cause vomiting; but we may remark that the ingestion of a tablespoonful of it would be likely to be *followed* by emesis. If that emesis should be sudden and violent, the hiccough would not be hindered from departing thereby.]

Carbolic Acid in Intermittent Fever.—It was stated by M. Calvert at the *Académie des Sciences* of Paris, in January, 1869, that MM. Barrant and Jessier had met with great success at the Mauritius in the treatment of intermittent fever, by means of carbolic acid administered by the mouth or by subcutaneous injection. The *Archives Médicales belgeś* reports the experiments of M. Decaisne at the military hospital of Antwerp to test the efficacy of the remedy. The results of those experiments were completely negative: and the conclusion of the observer was that carbolic acid was without efficacy in intermittent fever.

Preventive Treatment of Abortion when Uterine Congestion threatens to cause the Accident.—Dr. de Beaufort contributes a paper on this subject to the *Bulletin de Thérapeutique*. After saying that venesection is a prompt and serviceable remedy in some cases of emergency, he objects to it as not susceptible of frequent repetition. He then proceeds to speak of the use of bromide of potassium as a resource in threatened abortion, the uterus being congested. In the nervous or lymphatico-nervous female, he says, the bromide of potassium exerts its whole power, and we were led to employ it in such subjects by the following considerations—its marked harmlessness in pregnancy, its favorable influence upon certain nervous symptoms, in a word its well-known physiological effects. The salt excites the vaso-motor system, calms the excitement of the sensitive nerves, and paralyzes much of reflex action.

Dr. Beaufort gave bromide of potassium to five pregnant women, who had had no less than two previous abortions or premature deliveries. In four of them pregnancy went to the full term, and in the fifth, abortion seemed to be delayed. The drug was given each month for eight days before and eight days after the date corresponding to the presumed epoch of the menses. Under its use the threatening symptoms rapidly subsided.

In the *Journal of Materia Medica*, published at New Lebanon, N. Y., for January, 1870, Dr. James T. Newman, of Chicago, describes three cases of "Neuralgia of the Ovaries," which he treated successfully with the following prescription. Dose, teaspoonful thrice daily.

℞. Ammoniæ muriatis, ʒij.;
Tr. aconiti, ʒij.;
Syr. aurant. cort., ʒviij.
Misce. Fiat mistura.

He states that he was first led to use the remedies from reading an article in *Braithwaite*, part lviii. p. 251. The original article is by Dr. J. Waring-Curran, and directs that the following be used:—"An eight-ounce mixture containing two drachms of the muriate of ammonia, with *five*-drop doses of tincture of aconite." As Dr. Waring-Curran's prescription calls for five drops of the tincture of aconite, and that of Dr. Newman's for thirty drops at a dose, so great a discrepancy can only be accounted for by a typographical error, but none the less important to the patient should the prescription be used without calculating the dose. B.

A Well-Ventilated School-House.—*Mr. Editor*,—Allow me through your pages to call the attention of our profession, and of all interested in the general subject, to the fact that the city of Salem has just completed a school-house for five hundred pupils which is well ventilated. The plan adopted to secure this result is that which has been of late years so strongly advocated by Gen. Morin, the head of the "Conservatoire des Arts et Metiers," in Paris.

It is the system of suction by a heated shaft, and is very similar to that which is now successfully used in one of the buildings of the Insane Asylum at Somerville.

In the Salem school-house the shaft for extracting the air from all the rooms of the building is seventy feet high and five feet in diameter, and is warmed by the smoke pipe from the heating apparatus passing through its middle. In the summer it will be warmed by a stove of moderate dimensions. The vitiated air of the room is conducted to the base of this shaft. The sizes of the ventiducts, and of the registers which control their operation, have been carefully calculated from the directions of Gen. Morin, so as to ensure as far as possible an equal ventilation to each of the ten rooms of the building. There has been no hap-hazard, no guess-work, but in every detail the strict scientific requirements have been fulfilled. Theoretically, a certain number of cubic feet of air should be drawn from each room, and discharged through the vertical shaft in a given time, and the measurements of air currents in all parts of the building which were made by the writer, a few days since, with an anemometer, are in singular correspondence with this design.

Certain advantages of this plan of ventilation are very obvious.

1st, The pulling-power upon the air of the building is exerted in all weathers.

2d, It is simple—there is no machinery to get out of order. So long as the great vertical shaft is moderately warmed (36° Fahrenheit above the outer air) it is in working order.

3d, The power of extraction is in excess of the demand—there is enough of it, and to spare. The amount used is at the discretion of those who occupy the rooms.

The building is warmed by air drawn from without and passed over coils of steam pipe in the basement, and this is so managed that while the *temperature* is under the control of the teachers at all times, the flow of fresh air into the rooms *cannot be cut off*.

Truly yours,
George Derby, M.D.
Sec'y of State Board of Health.

Mr. Editor,—In your Journal of the 24th ult., page 135, there is a case reported of "Diphtheria followed by Paralysis (Asthenia) and death," in which the reporter says, "At 6, P.M., in consultation with Drs. Newhall and Williams, I gave her a subcutaneous injection of about three fourths of a grain of morphia. In about 15 minutes the patient fell asleep and was found to be dead at 4 o'clock the following morning. Circumstances make it probable that she died as early as 10½ o'clock the previous evening, but although she was never left alone she expired so quietly that no one was aware of her death."

Now as a matter of professional interest allow me to inquire if *about* three-fourths of a grain—which may be a little more or a little less—is a safe quantity of morphia to be given as a subcutaneous injection?

Admitting that the quantity was precisely three-fourths of a grain, is it certain that it would not have caused death in about the length of time the patient was supposed to have lived after its administration? The writer is by no means disposed to doubt that the patient would have died of her disease, sooner or later, or, that she expired far more quietly than she would have done had the morphia not been administered. There can be no question as to the propriety of administering morphia by subcutaneous injection under the circumstances related, but there certainly is a question as to the safety of giving three-fourths of a grain of morphia to a patient unaccustomed to its use, either by subcutaneous injection or by the stomach.

The lowest estimate of the strength of a grain of morphia is, that it is equivalent to six grains of opium. Taking this as the standard, three-fourths of a grain would be equivalent to four and a half grains of opium; surely a large dose for a female who had not used it habitually.

But this does not represent the case in its true light. It is an under estimate of the strength of morphia, and as by subcutaneous injection its effect is greater as well as more prompt, three-fourths of a grain administered in this manner would be nearly, or quite, equivalent to giving six grains of opium by the stomach.

Being well assured that many lives have been sacrificed by an inconsiderate use of morphia and other preparations of opium, and that the doses directed by some standard authors are larger than can safely be given, without regard to conditions of which the inexperienced cannot be presumed to be judges, the writer is induced to bring this subject before the medical public with the view of arriving more definitely at what doses are, and what are not safe, and as a caution to those who not having had experience themselves are necessarily governed in their practice by the experience of their seniors. Geo. Capron, M.D.

Providence, R. I., March 2, 1870.

We have received a pamphlet of eight pages, being a review of Dr. Ruppaner's case of laryngo-tracheotomy, by Lewis A. Sayre, M.D. According to Dr. Sayre's evidence, the operation in this case of laryngo-tracheotomy was not done by Dr. Ruppaner, but by Dr. Sayre; and also the case was "most inaccurately reported." We make extracts:—

"285 Fifth Avenue, *Feb.* 10, 1870.

"*To the Editor of the N. Y. Med. Journal.*

"Dear Sir: In the January number of your valuable journal, is an article headed 'Contributions to Practical Laryngoscopy. Four Cases of Morbid Growths within the Larynx. Reported by A. Ruppaner, M.D., Physician to the New York Dispensary for Diseases of the Throat and Chest.'

"One of the above cases is most inaccurately reported, and, as it is a case in which I have a personal interest, it becomes my duty to give it a passing notice, in order to correct the doctor's errors.

"The case is that of Captain Bigelow, of New Braintree, Mass. Dr. R. requested me to see Captain B., in consultation with him, some time in June or July, 1869. He had a tumor in the larynx, which the doctor has very accurately described, and which he was trying to remove by local application of various escharotics. On hearing the history of the case, and becoming satisfied that the tumor was increasing more rapidly than escharotics could destroy it, I advised its immediate removal by external incision, if he (Dr. R.) was satisfied that it was not malignant.

"Dr. Ruppaner assured me that he had repeatedly examined, by the microscope, pieces that he had pulled off with the forceps, and could find no trace of cancer, and, although it bled very freely, he could find no evidence of the tumor being malignant. In his published statement he says: 'Pieces the size of a pin's-head were removed with the forceps,' etc. * * * 'Examined under the microscope, these lobules were found to consist of cancer-cells, varying in type,' etc. I leave it to the doctor to explain this discrepancy between his statement to me, in the presence of Captain Bigelow, and in his published report." * * * * *

"I heard nothing more of this case until the 15th of August, about eleven o'clock at night, when I received, at Long Branch, the following telegram: 'The Captain is dying. Come immediately; he must be operated on at once. A. Ruppaner.'

* * * * * * * *

"We found the captain in his quarters over Goupil's picture-gallery.

"He was lying half-recumbent on a sofa, fanned by an assistant; was quite purple in the face and fingers, and evidently in great danger of suffocation.

"I suggested that there was no time to lose, when the doctor asked some of the gentlemen present to arrange the table for the operation, and to administer the chloroform, and asked me into an adjoining room to look at the various instruments arranged for the operation. There was a very large assortment of instruments on the two tables in the room, but I had no time to inspect them, as, looking back through the door and seeing the man in a dangerous condition, I suggested to the doctor that he had better hurry, or the man would die before he could finish the operation. *He then for the first time requested me to perform the operation*, stating that he was tired and nervous from want of sleep, having watched all night with the captain.

"I remarked that this was rather short notice for an operation of such magnitude, and that I preferred my own instruments and assistants. He replied in a hurried manner, 'Every thing is all right. I have every instrument all prepared, and Dr. Zolknowski was a pupil of Türck and Tröltsch, etc., and is the best assistant you could have.' While we were talking, some one came to the door saying, 'Hurry, doctor! the captain is dying.' Of course, there was no time for further discussion, and I immediately took the scalpel and performed the operation."

[Owing, as we are told, to proper tenacula not being at hand, the patient inhaled blood, and apparently expired, being with difficulty resuscitated.]

"Dr. Ruppaner, in his published account, says, page 349: 'No untoward event happened when the incision was made and the tube inserted.' The doctor may possibly think that death by inhalation of blood is not an 'untoward event,' but I am certain that no gentleman who saw the operation will agree with him." * * * *

[Copy.] "Fifth Avenue Hotel,
Dec. 31, 1869.

"My Dear Doctor: When I wrote the report of my case I had not the remotest intention to claim for myself any credit in my case that rightly belongs to you. If there is any doubt as to who performed the operation, I will clear up that doubt in a supplementary note to the Journal, as well as in reference to the hæmorrhage, which latter fact I acknowledge I overlooked in my report.

"Very respectfully,
"Your friend and servant,
"A. Ruppaner, M.D.

"Dr. L. A. Sayre, Fifth Avenue."

"As the February number of the Journal is out, without the promised explanation, I have, in compliance with the wishes of many friends, and in obedience to the duty I owe to the profession, made these facts public.

"The sentence in the doctor's letter, 'If there is any doubt as to who performed the operation, etc.,' refers to his ambiguous mode of expression, which is probably owing to his want of knowledge of the language. Of course, there can be no doubt, in the minds of those present, as to who performed the operation, but I will quote the doctor's description, and the reader will then see that he is correct in thinking that his description is liable to deceive. On page 348 he says: 'August 16th, operation for laryngo-tracheotomy. My friend Dr. L. A. Sayre, who had seen, at my request, the patient at a former consultation, consented to divide with me the responsibility, and to aid me with his skill and experience in performing the operation.' Further comment on this part of the report is unnecessary.

"In the last part of the report, he says: 'Nothing has been elicited from the captain since the above date, till a short time since, *I came in possession* of a statement of his case' (the italics are mine).

"This statement is copied from a letter from Captain Bigelow to me, and which is still in my possession.

"This letter I did not like to give to the doctor, as it contained some statements not very flattering to his veracity, and I did not like to hurt his feelings. In fact, the captain charges him with having deceived him by telling him that 'it was the most difficult and dangerous operation he (Ruppaner) ever performed in his life.' And the captain, having learned from Dr. Swan and Mr. Hobart that Dr. Ruppaner had not performed the operation, felt indignant at the deception."

We take the following extracts from the paper of Dr. Sankey, "on fractures of the ribs occurring in the insane." It is the paper referred to in the editorial article copied into this Journal in another place, from the same number of the London *Medical Times and Gazette* which contains Dr. Sankey's monograph. The paper is called forth by a letter written to the *Pall Mall Gazette*, by the prince of sensational fiction, Mr. Charles Reade. That letter has been copied on this side of the water. The propensity of that powerful writer to make his readers' hair stand on end like the "quills upon the fretful porcupine," has led him to make the degraded *hero* of one of his stories, in a drunken fit, commit a *quasi adultery* with that imaginary personage's own much abused wife; and in a kindred spirit to portray in the carnal tints of a Rubens the buxom charms of a mad-house matron, who falls in love with an inmate of her establishment incarcerated there, on a false charge of insanity, persecutes him for not returning her passion, and finally transfers her affections to a wealthy imbecile whose liberation she secures in order that she may marry him.

"It has been suggested by some that the injury was caused, therefore, by an assailant's knee. The bent knees, 'big bluntish bones, and clothed, can, it is suggested, be employed with terrible force, and yet leave no mark,' though the writer of these words exonerates the Doctors, asserting that they have been duped by the attendants; yet we cannot admit any such assertion to go for proof without a little more examination. I think, from anatomical reasons alone, that the knee thus protected would not fracture nine ribs; the knee itself could not cause pressure on more than two or, at the outside, three ribs. To fracture nine ribs, the opposing force would have to be ten or eleven inches in length; and since, in some cases, ribs on both sides of the body have been found broken, it follows that the force applied must have been a very wide body, or it must have been applied to the sternum, in which case it would have to be of immense force or weight to overcome all the elasticity of the cartilages in ordinary individuals. This force could not, I think, be exerted by the pressure of a knee of one man. * * * * *

"There are other equally forcible reasons why the hypothesis of wilful concerted injury is untenable. For example, it is admitted that evidence of the fractures, and how and when they occurred, has always been most difficult to obtain. The best evidence at all on the point is said to have been derived from insane persons in the wards. We here, I think, will admit that in some cases such evidence would be entirely reliable; but the evidence given has not been positive, as far as I can discover, nor in any case gone to show such an amount of force as would fracture the ribs of a healthy person: if the scuffles which these patients have witnessed and mentioned in their evidence have been the occasion when the injury actually occurred, which has never yet satisfied any jury, then there must be something peculiar in the patient's state, which does away with the theory of wilful injury, and also for the necessity of secresy.

"Again, these wilful injuries could only be concealed by a complete understanding between all the *employés* of the asylum; and not only between these, but among persons outside of the asylum. Whereas the evidence of the writer in the *Pall-mall Gazette* shows how two workmen at Hanwell saw an attendant (Jones) ill-treat a patient, and reported the fact at once. Of course the hiring of such a brute as Jones must occasionally happen; but the magistrates—who are answerable alone for the selection of the attendants at Hanwell—surely could not select none but such men—men only actuated by sheer malice. It is curious, too, with respect to this very case, in which the ill-treatment was actually witnessed, and in which the attendant was seen to strike the patient with a shovel, and walk over his body, stepping on his belly and chest, that no fracture of the ribs occurred, but that there were external bruises.

"There is still another point which may be mentioned, though this would scarcely seem worthy of repetition. The writer in the *Pall-mall Gazette*, Mr. Reade, appears to believe that the injuries are inflicted by the attendants with sufficient cunning to dupe the Doctors. These attendants must, therefore, be a singular mixture of cunning and obtuseness, for they must all know that the injuries they inflict must come to light, as the Doctors invariably make a post-mortem examination of the body; and all these cases have been brought forward by the medical officers.

"From these considerations I am of opinion that the force which causes these extensive fractures of the ribs is something of more sudden character than pressure, and something more extended than a knee or fist—the rapidity of the force appears to me to be essential—such accident as a violent fall or sudden blow, or injury by the contact of the sternum against a wide surface. But even such violence must be very great of its kind to produce so much injury in a healthy individual; the fall would have to be from a great height, or the pressure against the sternum of many hundred pounds in weight."

THE LOCAL TREATMENT OF CROUP. (By ADOLPH WEBER.)—A knowledge of the power possessed by lactic acid to dissolve fibrinous exudations induced the author to try it in cases of croup. At first he used it only after the operation of tracheotomy, partly with a view to keep the tracheotomy tubes clean, and partly hoping that the lactic acid might affect the membranes which extended downwards into the bronchi. The results were so favorable in both respects that he proceeded to try it in severe cases of croup before having recourse to tracheotomy. Since then he has not once had occasion to operate, and has not lost a single case of croup. In some very severe cases in which inspiration and expiration were equally obstructed, and the condition of the fauces indicated an abundant fibrinous exudation in the trachea, the difficulty of breathing was completely relieved within seven to ten hours of using this remedy, and two or three days after no trace of the local affection remained.

During the treatment there was not, as is generally the case, an expectoration of tough membranous sputa, but gradually the whistling barking inspiration and expiration were replaced by distinct rattling noises; the voice, before quite suppressed, began to assume a hoarse timbre, and considerable quantities of loose white frothy phlegm were expectorated during the fits of coughing, until at last the struggle for breath quite ceased, and the disease assumed more the character of a catarrhal affection of the throat.

The treatment consists in the local application of the remedy to the windpipe by means of inhalation. The patient is made to inhale a solution of lactic acid (15 to 20 drops in half an ounce of water) at first every half-hour, and afterwards, when the respiration improves, every hour or every two hours a solution of 10 to 15 drops in half an ounce of water.

The inhalation is discontinued as soon as the dyspnœa has subsided, and to promote expectoration camomile-tea is exhibited.

In using the inhalation care must be taken that the vapor does not affect the eyes or face.

With this treatment was conjoined the internal exhibition of carbonate of soda every half-hour or every hour, which was thought to exert a beneficial effect upon the exudation.—*London Med. Times & Gaz.*

ALMOST COMPLETE OSSIFICATION OF THE HUMAN BODY. By WM. M. BYERS, M.D., Columbus, Colorado county, Texas.

B., a youth of 17, came under my notice first about four years ago with extensive ossification of the muscular system, which continued to progress till his death, which occurred a short time since. The early history of his case, as given by his family, is as follows:

He was a healthy, stout child at the age of eight months, at which time his parents removed to Texas by land. During their continuance on the road and camping out, they first discovered tumors about in different parts of his body, the size of small marbles, and very hard. These tumors gave apparently but little pain, and in no way affected the general health. After an interval of twelve or eighteen months the tumors began to disappear by absorption, and about the same time stiffness of the joints was manifested. Gradual anchylosis followed, and at the age of ten years the hip joints with those of the arms were completely anchylosed. The ossific matter began then to be deposited in the muscular system. The chest became enclosed with a complete sheet of bone, leaving no traces of outline of the ribs. The head was immovably fixed by the ossification of the sterno-cleido mastoideus on each side. The muscles of mastication were as yet unaffected, and his ability to chew his food not impaired. His digestion was good, and his mental faculties more than ordinary. He could as yet use his wrists and hands, his arms being stiffened at right angles, thus allowing him to whittle a little with a penknife. When placed upon his feet he could move slowly and cautiously over a smooth surface, but if he got a fall, was unable to arise unassisted. Movement, however, as the anchylosis progressed, became more and more difficult and totally impossible at a later period. He did not increase in stature after his tenth year, and never manifested any signs of virility. The forms of the muscles were perfectly preserved and could be distinctly felt through the skin, which adhered closely to them. The deposition of ossific matter continued during his life, and, when he died, he was almost complete bone. Up to the hour of his death his mind continued clear and unimpaired, and his digestion, until a short time previous, was excellent. He suffered no pain, and was cheerful and apparently happy.—*New Orleans Journal of Medicine.*

MORTALITY OF PROVIDENCE, R. I. SCARLATINA.—Whole number of deaths during the month of February, 1870, 100—males 51, females, 49. * * * * *

Scarlatina will probably increase during the present month, and will afterwards decline as warm weather approaches. Some English writers contend (and their ideas are repeated in this country), that scarlatina is a highly contagious disease, and we are treated with special and minute directions for the disinfection of rooms where the disease has been present, and are urged to give particular care to the disinfection of the clothing and excreta of scarlatina patients. It would be supposed from the directions given that scarlatina is, if possible, more contagious than smallpox. It seems to me that all such teachings in relation to scarlatina are not only erroneous, but are calculated to do very great harm in the community by exciting unnecessary fears, and making unnecessary and utterly useless trouble. In my opinion, scarlatina is not, in any correct sense, a contagious disease ; nor is it even infectious in so great a degree as typhoid fever. It is true that our positive knowledge of the causes of scarlatina is limited. A dozen years since, one of my reports contained the following: —"Less is known in relation to the causes of scarlatina than in relation to those of almost any other disease, and it seems thus far to baffle all sanitary investigation and bid defiance to all sanitary precautions. Unlike most other epidemics, it visits equally the city and the country ; the solitary farm-house and the thriving village ; the hill and the valley ; and often exhibits its most terrific power where, judging from the known laws of epidemics, it would be least expected. It knows no distinction of classes, but destroys alike the children of native and of foreign parentage ; and carries desolation as often to the homes of the rich as of the poor. It sometimes *seems* to arise from contagion ; but again it often appears where contagion is impossible."

This was written in 1858. Since that time I have recorded the deaths of several hundred children from scarlatina, with all the particulars of age, sex, parentage, locality, &c., and have carefully studied the facts from year to year, and yet what I have learned of the causes of the disease has been little more than confirmatory of the sentiments then expressed. I think now that it is certain that scarlatina not unfrequently appears when there is no possibility of contagion ; that it frequently appears where there is no probability of contagion ; and that it very often fails to appear where there is the greatest exposure to contagion, if it exists. In a word, it is certain that all efforts to prevent the disease by seclusion or quarantine have utterly failed.

In Providence we can go still further, and I think we can prove positively that the good ventilation, the greatest cleanliness, perfect freedom from all offensive odors, and every convenience and luxury that wealth can procure, have not the slightest influence in preventing the disease. On the contrary, we can show that scarlatina in this city, during the last fifteen years, has been fully as severe and fatal among those who live in comfort and affluence, as among the poor and among those who live in poorly ventilated and filthy tenements.

Cleanliness and ventilation are of the utmost importance, and should never be neglected in any sick room. The comfort, and often the life of the patient depend upon them, but they will not prevent the spread of scarlatina.

EDWIN M. SNOW, M.D.
Supt. of Health and City Registrar.

American Medical Association.—The Twenty-first Annual Session will be held in Washington, D. C., May 3, 1870, at 11 A.M.

The following Committees are expected to report:—On Cultivation of the Cinchona Tree, Dr. Lemuel J. Deal, Pennsylvania, Chairman; on the Cryptogamic Origin of Disease with special reference to recent microscopic investigations on that subject, Dr. Edward Curtis, U.S.A., Chairman; on the Doctrine of Force, Physical and Vital, Dr. John Waters, Missouri, Chairman; on Variola, Dr. Joseph Jones, Louisiana, Chairman; on the Relative Advantages of Syme's and Pirogoff's mode of Amputating at the Ankle, Dr. G. A. Otis, U.S.A., Chairman; on a National Medical School, Dr. F. G. Smith, Pennsylvania, Chairman; on Commissioners to aid in Trials involving Scientific Testimony, Dr. John Ordronaux, N. Y., Chairman.

On the Climatology and Epidemics of—Maine, Dr. J. C. Weston; New Hampshire, Dr. A. P. Stackpole; Vermont, Dr. Henry Janes; Massachusetts, Dr. H. I. Bowditch; Rhode Island, Dr. C. W. Parsons; Connecticut, Dr. E. K. Hunt; New York, Dr. W. F. Thoms; New Jersey, Dr. Ezra M. Hunt; Pennsylvania, Dr. D. F. Condie; Maryland, Dr. O. S. Mahon; Georgia, Dr. Juriah Harriss; Missouri, Dr. Geo. Engleman; Alabama, Dr. R. F. Michel; Texas, Dr. T. J. Heard; Illinois, Dr. R. C. Hamil; Indiana, Dr. J. F. Hibberd; District of Columbia, Dr. T. Antisell; Iowa, Dr. J. C. Hughes; Michigan, Dr. Abm. Sager; Ohio, Dr. T. L. Neal; California, Dr. F. W. Hatch; Tennessee, Dr. B. W. Avent; West Virginia, Dr. E. A. Hildreth; Minnesota, Dr. Samuel Willey; Virginia, Dr. W. O. Owen; Delaware, Dr. L. B. Bush; Arkansas, Dr. G. W. Lawrence, Mississippi, Dr. W. Compton; Louisiana, Dr. L. T. Pimm; Wisconsin, Dr. J. K. Bartlett; Kentucky, Dr. J. D. Jackson.

On Veterinary Colleges, Dr. Thomas Antisell, D.C., Chairman; on Medical Ethics, Dr. Lewis A. Sayre, N. Y., Chairman; on American Necrology, Dr. C. C. Cox, Maryland, Chairman; to Memorialize State Medical Societies, Dr. N. S. Davis, Illinois, Chairman; on Nomenclature of Diseases, Dr. F. G. Smith, Pennsylvania, Chairman; on Medical Education, Dr. T. G. Richardson, Louisiana, Chairman; on Medical Literature, Dr. J. J. Woodward, U.S.A., Chairman; on Prize Essays, Dr. Grafton Tyler, D. C., Chairman. *Voluntary* communications will be presented by—Dr. John Curwen, Pennsylvania, on the Proper Treatment of the Insane; Dr. Nathan Allen, Massachusetts, on the Physiological Laws of Human Increase.

Secretaries of all medical organizations are requested to forward lists of their Delegates as soon as elected, to the Permanent Secretary.

Any respectable physician who may desire to attend, but cannot do so as a delegate, may be made a *member by invitation*, upon the recommendation of the Committee of Arrangements.

W. B. Atkinson,
Permanent Sec'y.
1400 *Pine St., Philadelphia.*

The Adhesive Strap Bandage after Parturition.—W. M. Ryer, M.D. (*Cal. Med. Gazette*), believes that all cloth bandages applied after parturition are movable, and tend to make pressure when least desired; besides, by their thickness, they heat the spine and parts covered.

The method of bandaging he has practised is to take about three-fourths of a yard of adhesive plaster and cut it into strips one and one-half inches wide, and long enough to extend from three or four inches from the spine on one side, over the abdomen, to within three or four inches of the spine on the other side. The heated plaster is drawn from the back of the hips, at the lower part, where the assistant presses the end against the skin tightly over and above the pubes, and around to the corresponding place on the opposite hip. Each strip is thus applied above the other, until we arrive at the umbilicus, in some cases one inch above. As adhesive plasters slip and stretch, they should be drawn tightly, gathering the looseness and folds of integument under the plaster. In a few hours these folds disappear. A second layer is applied over the first, to give it body and firmness, for the abdomen in its lower part requires a strong support. Thus the inferior portion of the abdomen becomes encased by adhesive plaster, whilst the epigastric region is free; and the relief is often so great, when properly applied, that patients who have lain upon the bed one or two weeks, bandaged with cloth, will, upon the application of this casing of plaster, ask permission to sit up or to leave their beds. Generally, at the end of the third or fourth day itching occurs, but it passes away by removing the bandage and washing the parts with warm water, and immediately renewing the bandage by fresh adhesive straps, as at first.—*New York Medical Record.*

Unique and Remarkable Case of Extra-Uterine Fœtation.—Dr. Lecluyse gives a remarkable case of this accident. A woman of twenty-eight, with deformed pelvis, was operated on, and delivered by Cæsarean section, August 15, 1866. She again became pregnant and in labor on March 23, 1868. On examination, the fœtus could be felt beneath the abdominal walls; but the pains shortly ceased, and it was determined to postpone the operation of section. In a few days a vaginal discharge of menstrual or bloody character appeared; no motion of the fœtus was felt, and the lower portion of the abdomen formed a kind of sac for the fœtus.

Cæsarean section was now performed with every care, and a seven or eight months fœtus removed, which was well developed, and dead. The placenta was adherent to the intestines. The wound was closed by sutures, save at the lower part, from which the umbilical cord was allowed to depend, as it was not thought possible safely to detach the placenta by reason of its vascularity. On the fifth day the placenta was decomposed, and a part of it removed; the patient died on the tenth day. On examination after death, it was found that the intestines bore no imprint of the placental attachment; but, what was most remarkable and interesting, the uterus, about the size of a goose egg, was found in the right iliac fossa held by strong adhesions, and on its anterior aspect, and a little to the left of the mesial line, was the open wound left by the incision made in the former Cæsarean operation. The sides were cicatrized separately, and left a hiatus through which the ovum had escaped, and formed this remarkable and perhaps unique example.—*Medical Press and Circular.*

In an article on Diseases of the Joints connected with Progressive Locomotor Ataxy, by Benjamin Ball, Professeur-Agrégé at the Paris Faculty of Medicine, occurs this passage:—

"The researches of modern histologists, and especially of Valentiner, Luys, Lockhart Clarke, and Charcot, tend to connect progressive muscular atrophy with the destruction of the nerve cells which occupy the anterior cornua of the grey substance. Should further researches enable us to establish a constant connection between these two lesions, it will then be demonstrated that the nutrient centre of the muscular system resides in a given point of the spinal axis. But that which may be proved true according to this hypothesis, as regards the muscular system, may perhaps hold good, in an equal degree, in reference to the articulations, the health of which, in a great measure, depends on the integrity of the nervous centres."—*Med. Times & Gaz.*

Malignant Pustule of Scrotum.—A young man had the entire scrotum involved by malignant pustule. The anterior portion was almost entirely eaten away. By the continued application of powdered charcoal, with hydrochloric acid, pure, the march of the gangrene has been arrested as if by magic; both testicles were exposed to view; now, new matter is forming around them. Another man in the same ward exposed himself, and has the same affection, having left his own bed and gone into the one occupied by the patient first mentioned. A small pustule formed, spreading rapidly, and the glands became plainly exposed to view. This man is recovering rapidly by the same external treatment—no internal remedies being used in either case.—*Baltimore Medical Bulletin.*

Proposed Improvement in the Trephine.—Dr. A. F. Magruder, of Sharon, Miss., ends a clinical report in the Richmond and Louisville Medical Journal, with the following admirable suggestion:

"In conclusion, I would suggest to the profession an improvement in the circular trephine. It consists in a circular blade, which should be made to embrace closely the barrel of the trephine and be so arranged with a temper screw as to slide up or down, at pleasure. With this, I propose, after dividing and turning back the flaps more nicely and accurately, to divide the pericranium around the trephine, without the use of the scalpel."—*N. Orleans Med. J.*

DEATHS FROM CHLOROFORM.

Death from Chloroform.—A lady died in New York, last December, from the inhalation of chloroform. The jury found that her death was caused by inhaling chloroform to relieve headache. People cannot be too earnestly cautioned against the use of this dangerous drug unless under professional direction and administration; even then deaths are of not unfrequent occurrence in hospital practice.—*Philad. Medical and Surg. Journal,* March 5th.

Medical Miscellany.

Chloroform again. The Question answered by the Foreman of the Jury. *Mr. Editor*,—On examining the evidence in such cases as are alluded to by "Another Innominatus," in the Journal of March 10th (but without indicating that case), we think that, as a rule, Rum Did It.

A Paradox.—The disputants agree that a certain tissue is chiefly involved in dislocation of the hip: and yet that tissue is precisely what they differ about. What is it? Why (Y) ligament!

In the evening of Wednesday, March 9th, the day of the Commencement Exercises at the Harvard Medical College, a levee was held at the house of Prof. N. C. Keep, No. 74 Boylston St. His Excellency Gov. Claflin, Hon. Harvey Jewell, President Eliot, and other distinguished gentlemen were present, besides the Faculty of the College and members of the graduating class.

The *Chicago Tribune* last summer gave an account of "A new Surgical Operation" as "The Recent Achievement of Dr. G. D. Beebe"—"The Removal of nearly Five Feet of Human Intestine." "How it was Done."

These were the headings of a long article on the subject. We are informed that the patient died four days after the operation. Whether the heart was or was not "flabby or fatty," we have not heard.

Poisoning by Chlorine Gas at Dublin.—Last week a sailor lost his life by inhaling chlorine gas. He slept in the forecastle of a small schooner which had taken in a cargo of salt cake and chloride of lime. Either owing to the salt cake having been shipped whilst too highly heated (a common practice), or from the chloride of lime having become damp, two barrels of the latter decomposed during the night and filled the vessel with chlorine gas. Dr. Cameron deposed at the inquest that the cause of death was the inhalation of chlorine gas, which had produced a spasm of the glottis, and thereby induced apnœa. The lips, tongue and gums of the deceased were bleached, the pulmonary organs were congested, the trachea inflamed, and chlorine gas was detected in the brain. No case of death from inhalation of chlorine is recorded in Taylor's "Medical Juprisprudence."—*Dublin Medical Press and Circular*, February 2.

Death from Quack Medicine.—The Liverpool Coroner held an inquest on Tuesday, Feb. 8, on the body of a man named McDowell, 20 years of age. He had for some time been afflicted with an affection of the skin, and had obtained a French specific, which was intended to be mixed with water, and used in a bath. Instead of thus using it, he rubbed it on his body just as he received it from the chemist. The poison it contained was rapidly absorbed into the system, mortification followed inflammation, and death resulted. It was proved at the inquest on the body of the deceased that the preparation used was a strong solution of perchloride of mercury. In addition to the symptoms on the skin, the deceased suffered from violent cramp of the stomach and legs.—*London Medical Times and Gazette.*

Syrup of Hydrate of Chloral.—The hydrate of chloral is coming largely into use as a soothing medicine, and any preparation which tends to render it more easily taken will be welcome. Messrs. Ferris, Union Street, Bristol, have succeeded in preparing a tolerably palatable and easily dosed syrup, which will save much trouble in dispensing. We have administered it in a case of obstinate irritable cough during pregnancy, and in another of sleeplessness from general malaise and mental anxiety, and have found it agree perfectly, and produce the desired result in both cases. We may add that the syrup contains ten grains of pure chloral to the drachm, and that the price is eight shillings per pound.—*Ibid.*

Pamphlets Received.—Review of Dr. Ruppaner's Case of Laryngo-Tracheotomy. By Lewis A. Sayre, M.D., New York. Pp. 8.—Twelfth Annual Report of the Chicago Charitable Eye and Ear Infirmary, presented to the Board of Surgeons, for the year 1869. Pp. 8.—Intermarriages of Kindred. Consanguineous Marriages not forbidden by Moral or Physiological Law, &c. Annual Address delivered before the Eclectic Medical Society of the State of New York, by Alexander Wilder, M.D., President of the Society. Pp. 32.

Deaths in fifteen Cities and Towns of Massachusetts for the week ending Feb. 26, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases.		
		Consumption.	Pneumonia.	Scar. Fev.
Boston	114	18	12	5
Charlestown	10	4	1	0
Worcester	17	3	4	1
Lowell	11	4	1	0
Milford	7	4	0	0
Chelsea	7	1	1	0
Cambridge	16	1	1	1
Salem	9	2	3	1
Lawrence	9	0	2	0
Springfield	8	2	1	0
Lynn	9	1	3	0
Fitchburg	3	0	1	1
Newburyport	5	2	1	0
Fall River	11	1	1	0
Haverhill	3	1	0	1
	239	44	32	10

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending March 12, 114. Males, 53—Females, 61.—Accident, 1—apoplexy, 2—asthma, 1—disease of the bowels, 1—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 4—inflammation of the brain, 1—cancer, 1—cholera infantum, 1—cholera morbus, 1—consumption, 18—convulsions, 3—debility, 3—diarrhœa 1—diphtheria, 2—dropsy, 2—dropsy of the brain, 4—dysentery, 2—epilepsy, 1—erysipelas, 1—scarlet fever, 5—typhoid fever, 1—disease of the heart, 3—intemperance, 1—disease of the kidneys, 1—leucocythæmia, 1—congestion of the lungs, 6—inflammation of the lungs, 12—marasmus, 4—measles, 1—old age, 7—paralysis, 4—pelvic cellulitis, 1—peritonitis, 1—pleurisy, 1—premature birth, 2—puerperal disease, 2—rheumatism, 1—small-pox, 1—disease of the spine, 1—unknown, 2—whooping cough, 3.

Under 5 years of age, 45—between 5 and 20 years, 6—between 20 and 40 years, 20—between 40 and 60 years, 20—above 60 years, 23. Born in the United States, 84—Ireland, 24—other places, 6.

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Original Communications.

REMARKABLE CASE OF INJURY OF THE BRAIN. DEATH ON THE TENTH DAY.

By Sherman Cooper, M.D., Claremont, N. H., late Surgeon 6th Regt. N. H. Vols.

[An abstract of the following case was presented, some months since, to the Boston Society for Medical Improvement by Dr. J. B. Upham. It excited considerable interest at the time, and was deemed worthy to rank among the many remarkable cases of injury to the brain which have been brought to the notice of the Society within the last few years. At our request, Dr. Cooper has furnished his original notes of the case, and has kindly deposited the spike and a portion of the planking alluded to in his report, in the Museum of the Massachusetts Medical College.—Ed.]

On the morning of the 4th of December, 1868, I was called to see Edmund Seiger, about 28 years of age, who had fallen from a scaffold, 16½ feet high, in a barn, his head striking upon an iron spike which projected about two inches from the floor. This spike was made of wrought iron, with a flattened head projecting on either side from the shaft in the form of a T. It entered the head at the upper and posterior part of the right parietal bone, carrying before it a portion of the skull (an inch square) into the substance of the brain to the extent of about two inches. The skull was fractured likewise in a line extending from the point of the injury nearly to the right ear. This fracture allowed the bones to separate and close again, as the spike was driven through the skull, so as to button the patient firmly down to the floor.

Great injury had been done to the brain, before my arrival, in the attempts to extricate the head from this position—two strong men having exerted a good degree of force in attempting this, but in vain. The patient was finally released by splitting the plank to which his skull was attached, an axe and a crowbar being used for this purpose. At the time of my arrival, about an hour and a half after the accident, the spike still remained in the skull. After removing this by careful separation of the parts, I extricated, by means of an elevator and forceps, the square piece of bone above mentioned, and subsequently four other smaller fragments, and raised the adjacent parts to their proper position. Immediately after this the patient was able to speak and to converse rationally. There was, however, a complete loss of sensation and motion on the left side. About seventy-two hours after, severe pain in the left arm and leg ensued, which lasted for half an hour, when almost instantly sensation returned and the pain subsided, but motion never returned. He continued in a rational condition, and wholly free from inflammatory symptoms, until the ninth day, his pulse never rising above 70 in the minute. On that day, however, the portions of the brain which had been broken down became separated and were discharged. From this time the patient rapidly sank, and died on the day following—the tenth from the time of the accident.

On examination after death, I found that the substance of the brain had been very much broken up for a space of about four inches in diameter and two inches in depth, caused by the patient's being violently wrenched and twisted around while spiked to the floor.

The spike measured 3⅝ inches in length and 1½ inches across.

February, 1870.

SYPHILITIC STRICTURE OF THE ŒSOPHAGUS.

By W. A. Gillespie, M.D., Louisa Co., Va.

Writers for medical journals generally, in publishing ordinary and extraordinary cases and surgical operations, fail to give subsequent or final results. I will therefore call the attention of your readers to a case of syphilitic stricture of the œsophagus operated on by me in February, 1869, and published in your Journal Dec. 16, 1869, New Series, Vol. IV., No. 24. That case, from being one of great agony and torture, with constantly threatened fatality, was immediately relieved, with a comfortable and improving condition up to the present time. Herewith is an extract from an unsolicited letter from the patient, which I give verbatim (excluding only some very highly flattering and thankful expressions to myself, which might seem egotistical in me to publish). The patient lives about fifteen miles from me, in Orange Co.; his case was of several years' duration.

"January 25, 1870.

"My kindest of Friends,—The Medical Journal containing report of operation on my throat was received this morning. * * * * * My throat has been less inclined to ulcerate since your operation than it ever was before, but is still disposed to contract. I avoid any *inconvenience* from it, however, by the frequent use of the instrument you directed. I suffer greatly sometimes with pains in the bones of my head and limbs, but I find iodide of potash a sovereign remedy for that as well as ulceration of the throat. One remarkable thing about my disease is that these pains always cease when my throat ulcerates. I am never afflicted with both at the same time."

I learn from the patient's friends that he is comfortable and improving. This case originated in syphilis and a profuse salivation. If your readers will turn to page 378 of the July number for 1869, they will see a mild case reported by Dr. Sinclair, treated successfully by the use of a probang, iodide of potassium, &c. Two cases are referred to by Dr. Langston Parker in his work on syphilitic diseases, London, 1860; both cases died, exhausted from inability to swallow food, and it does not appear that there was any surgical attempt at relief.

March 7, 1870.

ON THE TREATMENT OF SYPHILIS BY SUBCUTANEOUS INJECTION OF SUBLIMATE. VIEWS OF THE VIENNA SCHOOL.

Translated by J. C. White, M.D.

[In connection with what has already appeared in the Journal upon Lewin's method of treating syphilis, the results of its use in the two great clinics of Vienna may be of interest. The following extracts from the annual report of the General Hospital of that city are taken from the last number of the *Archiv für Dermatologie und Syphilis.*]

In the clinic of Prof. Hebra the method was employed upon 20 males and 20 females. Although the abscesses, at the point of injection, were of a mild character and appeared in only a few of the cases, and although the patients did not in general object to the fresh pain which was daily inflicted upon them, he could not bring himself to continue the treatment. Its effect upon the syphilitic symptoms was later in manifesting itself, as a rule, than by inunction with unguentum cinereum. Against individual symptoms, such as pains in the head and joints, the employment of the usual remedies, as iodine, could in no way be given up, and relapses were as often observed as in other methods of treatment. Inasmuch, therefore, as this method acts less quickly and surely than those hitherto employed, and appears to have no effect against some of the symptoms of the disease, and, finally, as it always gives rise to pain and occasionally to abscesses also, Hebra concludes that the method cannot be especially recommended.

In Sigmund's clinic the injections were practised upon more than one hundred patients, affected by nearly all forms of syphilis. The solution employed for injection was of about the same degree of concentration as that used by Lewin—four grains to the ounce of distilled water. In the beginning twelve grains of this solution were injected once or twice a day; afterwards, twenty-four grains once a day. The regions which showed themselves best adapted to receive the injections were, as Lewin recommends, the sides of the thorax, the groins, the buttocks and the upper arms. Attempts to enlarge these limits led to unfavorable results. Neither the outer, front, or inner surface of the thigh, nor the upper scapular space were found fitted for the injections. On the thigh severe phlegmonous inflammation and abscesses formed about the point of injection. Special attention was directed at the beginning of treatment and throughout to the care of the mucous membrane of the mouth. Cleansing by the nasal douche, by gargles, and by the application to the gums of tincture of rhatany and galls was energetically carried out, and to this alone is to be attributed the prevention of those severe cases of stomatitis which Lewin met with. Without the observation of such rules it would be often impossible to carry out the treatment. It excludes, therefore, patients with caries of the teeth and poor gums, as well as those who are weak and poorly nourished.

The results of the treatment were often very favorable; severe forms of syphilis healing within a noticeably shorter period than by any other method of treatment. This, with its precision, ease and convenience of application, prevented a full estimation of the evils which were noticeable from the first, such as the painfulness of the injection, the formation of abscesses although seldom, and the difficult prevention of stomatitis. But if these disadvantages are not sufficient to counterbalance the advantages of the method, the latter would be more than outweighed by the relapses which so soon show themselves, or, in other words, by the farther development of syphilis. In nearly all the patients who could be kept for any considerable time under observation, these relapses appeared, and much sooner than after any other method of treatment. The obstinate nodules, often exceeding a hazlenut in size, which so readily form at the points of injection on the buttocks, are likewise more than dark points in the method. However much it may be regarded as an enrichment of our therapeutics, it can in no way compete with the inunction-cure.

CASE OF FATAL POISONING FROM THE EXTERNAL APPLICATION OF MERCURIAL OINTMENT IN A CASE OF SCABIES.

Reported by Dr. Leiblingen, of Tarnopol, in the Wiener Medizinische Wochenschrift for Dec. 1, 1869.
Translated by HENRY TUCK, M.D.

ONE morning in January last, three persons were found dead in bed. They were in good health the day before, and had been rubbed all over with a mercurial ointment for the cure of scabies. The room in which the three bodies were found was damp and very poorly ventilated. Autopsies were at once made on all the three bodies, but as the appearances and results in each case were identical, an account of only one will be given.

External appearances.—W. R., 18 years old. Hair dark brown. Eyes blue, pupils dilated. Chest well developed. Abdomen normal. The teeth were covered with tartar, the gums were shrunken away from them, of a deep greyish blue color and much swollen. The mucous membrane of both upper and lower lip was swollen and blue, and deprived of its epithelium. The smell from the mouth was very offensive. The integument of the whole body was in many places of a dark violet color. On the hands, feet, breast, belly and back, were here and there dry brownish spots as large as a pea, where the burrows of the itch insect had been. Otherwise, with the exception of patches of ecchymosis on the back such as are usually seen after death, there were no marks on the body or any appearance of violence having been inflicted.

Internal appearances.—The integument of the cranium was filled with blood, the bones of the skull thick and compact, and the dura mater, the sinuses and the pia mater, as well, gorged with dark, almost black, fluid blood.

The cerebrum and cerebellum and all their vessels were completely full of dark fluid blood, so that the whole brain was of a deep red color. On cutting the brain, the substance of both cerebrum and cerebellum had scattered through it spots, as large as a pea, where there was effused blood. At the base of the skull there was a considerable quantity of fluid blood.

The thyroid gland and the mucous membrane of the glottis and trachea were saturated with blood.

Both lungs were slightly adherent to the walls of the thorax, greatly congested, of a dark bluish-red color, and on being cut into poured out a considerable amount of fluid, frothy blood. The pericardium was distended, and contained two ounces of bloody fluid. The heart was flaccid, and contained a considerable amount of dark fluid blood. The liver and spleen were both dark colored and greatly congested. The stomach was greatly distended, but was not opened, as its contents were saved for chemical examination. The intestines were normal. Both kidneys were much congested. The bladder was distended.

The following parts were saved for chemical examination :—The stomach and its contents; a portion of the lungs; a piece of the intestines, large and small; one kidney; a piece of the liver; a piece of skin, to prove that some ointment had been rubbed on.

Results of the Autopsy.—It is proved beyond question that W. R. died a sudden death, due to congestion of the brain and its membranes, and of both lungs, to cerebral and pulmonary apoplexy and consequent paralysis of these organs. The brain and its membranes were found filled with dark fluid blood; the substance of the brain, on section, showed numerous points as large as a pea, where effusion of blood had taken place (cerebral apoplexy), and both lungs were gorged with blood, and on being cut into poured out frothy blood in considerable quantity (pulmonary congestion). It is proved that W. R. had scabies, and that his body had been rubbed with some ointment. Some of this ointment was saved, and could be seen at a glance to be composed of quicksilver, cinnabar and other substances. The swelling of the gums and the deposit on the teeth were proof that mercury had been absorbed by the blood.

Conclusions.—In the ointment which was used, and in the lungs, kidney and skin, chemical analysis disclosed metallic mercury in considerable amount, proving that the mercury, after being rubbed into the skin, was absorbed into the circulation and thence deposited in the internal organs.

Mercury, when rubbed into the skin in large amounts, is very quickly absorbed and passes into the circulation. The blood is charged with the metal, which either after slow absorption in small amounts produces diseases due to cachexia, or absorbed quickly in large quantity produces death, due to paralysis of important viscera.

Both the autopsy and the chemical analysis proved that the death of these three persons was produced by paralysis of the brain and lungs, consequent upon poisoning of the blood by mercury absorbed from the skin which had been rubbed with a mercurial ointment, in the preparation of which it was admitted that nine (9) ounces of quicksilver were used.

It is a fact of especial interest, that the same pathological appearances were found in all three of the bodies, namely, hyperæmia of all the viscera of the body and fluidity (non-coagulation) of the blood.

Selected Papers.

THE GLASGOW INFIRMARY AND THE ANTISEPTIC TREATMENT.

From the London *Lancet* of Feb. 5, 1870, we copy the following communication signed by Joseph Lister, of Edinburgh :—

In a letter addressed to you by the Managers of the Glasgow Infirmary through their secretary, it is affirmed that I have made unfair statements in a paper which you lately did me the favor to publish; and I fear that if this charge were to remain unanswered it might shake the faith of the profession in my testimony. I will, therefore, proceed to notice in succession the various points of this communication.

In the first place, statistics are adduced to show that the surgical hospital has not been an unhealthy one as compared with other similar institutions. But my statements referred, not to that building as a whole, but to the lower wards of it, and especially to those on the ground floor. I was well aware that the wards in the highest story were very healthy ones, as might be expected from their elevated position raising them above the sources of mischief in the adjacent ground. But the unhealthiness of the ground-floor wards in former times was well known to the managers, and is but too plainly indicated by my statistics of amputation, which I confess I felt somewhat humiliated in publishing. I believe I have not been guilty of any exaggeration in speaking of those wards as "some of the most unhealthy in the kingdom" before the introduction of the antiseptic system. There is one point with regard to the figures given in the latter which is extremely satisfactory to myself—viz., that they serve to contradict, on competent authority, an anonymous statement which was made some time ago in one of the medical journals, and has been repeated *ad nauseam* in various quarters, implying that the use of antiseptic measures in the Glasgow Infirmary had led to an increased mortality. The statement, which was said to be founded on the hospital records, I could hardly have contradicted, although it was entirely the reverse of the truth as regarded my own department, without appearing to cast a slur upon the practice of my colleagues. But I rejoice to find that, taking the results of the practice of all the four surgeons of the hospital, the death-rate during the three years of the antiseptic period has been less by fully one-fifth than during the five previous years.

In the second place, "the directors positively deny" my statement that, at a certain period, I "was engaged in a perpetual contest with the managing body, who were disposed to introduce additional beds beyond those contemplated in the original construction"; and this denial is supported by an allusion to an arrangement made by the directors in 1866 regarding the number of beds in each ward. But some of the managers now in office were not connected with the institution during the period to which I refer, which was between 1861 and 1866. The word "contest," though perhaps an unfortunate one, expresses but too well the perpetual struggle which I at one time maintained, not, indeed, as a general rule, with any of the managers personally, but with the superintendent, who acted on their behalf, and who, being an exceedingly gentlemanly man, found it very difficult to please both parties. The excess of beds beyond what appeared to me right was chiefly in the form of cribs for children, no less than six of which, if I recollect rightly, were at one time introduced into my female ward with the object of making it serve the purpose of a children's hospital. And as there must always be several children in such a ward, the effect was practically much the same as if six additional beds for adults had been placed there. A gentleman who was formerly my house-surgeon could tell how, being once left in charge in the superintendent's absence, he exerted his temporary authority in removing the extra beds; and, the change effected by this expedient being afterwards maintained by dint of constant vigilance on my part, my wards presented for the next two years and a half a striking contrast to all other wards in the house. The new arrangement by the managers in 1866 was, as regards the hospital generally, a great improvement, but it did not come up to my own idea, nor to that which I had previously succeeded in carrying out; and if it had been strictly enforced, my wards, instead of benefiting like others, would have had additional beds introduced. In my female ward, I contrived to evade it, by stowing away empty cribs in a private room; and in my male accident ward, the previous arrangement was happily left undisturbed, so that it contained, and I believe still contains, two beds less than the other ward of the same size on the same floor. Thus, with reference to the subject of my late paper, it is very important to observe that, during the three years preceding the antiseptic period, my wards contained precisely the same number of patients as they did during the three subsequent years, which presented so striking a contrast with them in salubrity, except only that, as stated in my paper, the nurse of my female ward was of late allowed to re-introduce the unused cribs, and also to put two children in one bed, in consequence of the healthiness of the inmates.

When speaking of the struggle above mentioned as a contest, I intended nothing disrespectful to the managers. Each party had a laudable object in view. They desired to accommodate as many patients as possible, while I was very anxious that those who were admitted should have favorable atmospheric conditions; and these two laudable objects were for a while antagonistic.

In this connection the letter proceeds to speak, with what relevancy I do not understand, of my keeping patients longer in the hospital than other surgeons; and it is stated that, in my male accident ward (24), which is that to which I have especially referred, only about two-thirds of the number were under treatment that were admitted into the corresponding ward (23) on the same floor. In making this statement, the author of the letter has strangely overlooked the fact that, partly in consequence of two additional beds in the body of the ward, and partly from the existence of three private rooms in connection with it, such as have nothing to correspond to them on the other side of the house, ward 23 contains twenty-one beds, while ward 24 has only fifteen; a difference in accommodation which nearly accounts for the differing numbers of the patients.

Had the proportionate numbers been still less in my ward, I should not have been surprised, because the great mortality which ward 23 at one time presented led to the premature dismissal of patients in a way most undesirable. But the fact that a nearly equal number in proportion to the beds were treated in my ward, in spite of the long detention of some cases of serious injury which, but for the antiseptic treatment, would have received a too early dismissal, tends to prove, what I have long believed, that the rigid enforcement of the antiseptic principle, by hastening the cure of the majority of the patients, more than compensates for the long detention of exceptional cases.

Some abscesses connected with diseased bone, treated in the chronic and female wards, certainly proved extremely tedious, and severely tried my patience, as well as that of the managers. But I have the satisfaction of knowing that several persons once affected with suppuration of the hip-joint or vertebræ, are now useful members of society, who would, as I believe, have been most of them long since in their graves had I not perseveringly carried out the antiseptic treatment.

I am next charged with inconsistency for having shown a strong desire to be continued in office as surgeon to the infirmary in 1869, whereas I had previously felt it a questionable privilege to be connected with the institution. But seeing that the wards had, in the interval, undergone a total change from great unhealthiness to the very reverse, the whole ground of my previous feeling regarding them had ceased to exist. Not that in using the expression "questionable privilege" I intended to convey the idea that I had at any time actually contemplated resignation of the office. Its importance as a means of instruction would undoubtedly have induced me to retain it even if I had continued to suffer the bitter anxieties and disappointments which the unhealthy state of the wards formerly occasioned.

The letter then points out a mistake which I made "when speaking of the male wards as being on a level with the ground behind the hospital, the fact being that the ground is from 12 to 15 feet below the floor of the lowest wards." Here I inadvertently committed an inaccuracy, though not to the extent above indicated. I judged roughly from the appearance of the ground as seen from the back windows of my ward (24). But it turns out, from an estimate which I have had made, that there is a difference of level of between five and six feet between the floor and the ground; and in the case of ward 23 the difference amounts to nearly twelve feet, in consequence of a slope in the ground, which, as I never looked out of those windows, had escaped my notice. But the mistake is not one of very material moment.

The next paragraph in the letter I am compelled to quote entire: "With reference to the cleaning of the wards which Mr. Lister had charge of, the same cleansing was applied to them as to all the other wards in the house." This statement positively astounds me. Certain it is that my wards were not subjected to any annual cleaning during the three years of the antiseptic period. The sentence therefore must be interpreted as meaning that all the other wards were similarly left undisturbed. But the author of the letter must surely have a lively recollection of the fact stated in my paper, that in the latter part of the first year ward 23 was cleared out and shut up entirely for a while on account of its great mortality; and I was present, by desire of the managers, at a conference which they held with the medical officers, with the view of eliciting any suggestions as to how the walls, &c., might be treated so as to prevent similar infection for the future. As to what has taken place in other wards I do not know from personal observation; but I was informed, through trustworthy sources, that some at least had been emptied and thoroughly cleansed once, if not oftener, in the course of the last three years.

I am next said to have "fallen into a grievous mistake as to the pit-burying" in the cathedral churchyard. The pit which I saw is stated to have been "about sixty yards to the north-east of the hospital," and "such interments were not made there till January, 1869." With regard to the former point, I have said in my paper that the grave in question was "a few yards only from the windows of the surgical wards." I know that, as I stood beside the pit, it seemed most uncomfortably near the hospital; and, after all, sixty yards are not many for the distance of such a neighbor. As to the second point, it is, I fear, the author of the letter who has fallen into error. Considering the enormous number of bodies that are said to have been so buried in that locality—for, to quote again an extract from THE LANCET copied from one of the Glasgow newspapers, "the Dean of Guild is said to have computed that five thousand bodies were lying in pits holding eighty each .... around the infirmary"—it appears utterly incredible that all should have been placed there within a twelve-month. But, besides this inference, I have evidence, from inquiry made from eye-witnesses, that the process of pit-burial has been going on for many years past in the same burying-ground, if not in the identical spot where I saw it.

Finally, it is said that "the directors have no intention of discussing the effects of the antiseptic treatment; but, in their opinion, which is shared by those of their number belonging to the medical profession, the improved health and satisfactory condition of the hospital, which has been as marked in the medical as in the surgical department, is mainly attributable to the better ventilation, the improved dietary, and the excellent nursing, to which the directors have given so much attention of late years." I cannot believe that the author of the letter has here represented faithfully the sentiments of the medical members of the board of management. Some of them have, to my knowledge, a very different opinion of the antiseptic treatment from that which is implied in the above passage. And to suppose that the kind of change which I have described as having taken place in the salubrity of my wards can be attributed to the causes referred to, is simply out of the question. As regards the ventilation of those wards, it remains precisely as it was, with the exception of a freer access of air to the back of the hospital, in consequence of taking down the high wall, as mentioned in my paper; and this was not done till my patients had been already for nine months perfectly free from hospital diseases. As to nursing, my department was not affected by the change that occurred. I was fortunate enough to have excellent nurses from the commencement of my connection with the infirmary, and I continued to have such to the last. And as to the dietary, the idea that a mere improvement in rations would abolish pyæmia, erysipelas, and hospital gangrene, is one which would hardly enter the mind of an intelligent medical man. In speaking thus, I do not wish to undervalue the improvements which have been introduced of late years into the system of management.

In conclusion, I must express my regret at appearing in collision with a body of gentlemen for whom I entertain sincere respect, and from whom I have always received consideration and kindness. Finding myself in possession of a mass of evidence which appeared to me to be of great importance to the community, I felt it my duty to publish it in detail. And looking back upon the manner in which my statement was made, I do not see in it any just ground of offence, except, perhaps, the unfortunate word "contest," which, as I have explained, was not intended in any disrespectful sense. With that exception, I have not said anything which could be construed as in the slightest degree reflecting on the managers. When mentioning the interments near the hospital, I pointedly alluded to the energetic and praiseworthy exertions of the directors to suppress or mitigate the evil. Had I spoken of the unhealthiness of the wards as something which could not be avoided, it might with some justice have been objected that I had cast needless discredit upon the infirmary. But when I mention it as a thing of the past, and show that for three years those wards have been more free from hospital diseases than, I suppose, any other surgical wards in the world, I have surely thrown credit, not disgrace, upon the institution over which the directors so ably preside, and to which I am myself so deeply indebted.

* * *

A Paris *pharmacien* has been lately condemned by the Correctional Tribunal of the Seine to pay a fine of one hundred francs, with costs, or suffer imprisonment for forty days, for supplying a bottle of Cinchona Wine, of the French *codex*, instead of "Seguin's Cinchona Wine," which was ordered, in prescription, by a physician. In addition to fine or imprisonment, the unfortunate druggist has to suffer copies of the judgment of the Tribunal to be displayed on his door, and at the shops of nine other pharmaciens who reside in the vicinity.—*Canadian Pharm. Journal.*

Medical and Surgical Journal.

Boston: Thursday, March 24, 1870.

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA ONCE MORE.

We have received a copy of the *National Republican* marked with the initials J. M. T., and containing a lengthy communication by A. Y. P. Garnett, M.D., entitled "Letter from Dr. Garnett in reply to Senator Sumner." Respect for Dr. Toner requires of us a notice of this well written but caustic article. Otherwise we might perhaps have properly dropped the subject with the statement of the points in dispute, which we gave in our issue of the 3d instant. We take this occasion to recognize the disinterested and devoted labors of Dr. Toner in behalf of the profession; and we regret to entertain a different impression from his of the merits of the controversy.

The letter of Dr. Garnett takes up four points "as made by Mr. Sumner" in his "report against the Medical Society of the District of Columbia." Number 1, referring to the fact that the charter does not require any test of membership on account of color; and number 2, concerning the relation of the voluntary "association" to the chartered "society," have received no new developments—that we can discover—at the hands of Dr. Garnett.

"The third point made by the Senator," Dr. G. says, "is, that the negro doctors of this District, by the conduct of the Society, are debarred from consulting with its members, embracing as it does nearly every white practitioner in the District. To this we have only to repeat what Mr. Sumner is as fully aware of as ourselves—that the medical society has no control whatever over this matter, the subject being exclusively under the jurisdiction of the *Association*. We will, nevertheless, add that the charge is practically a false one, since it is well known and acknowledged indeed, in the report itself, that the white members of the Society did consult with these negro doctors as far back as June, 1868, and that many of them have habitually done so for the last two years without any notice of their conduct whatever having been taken by the Association; so that in point of fact, these malcontents have not even that pretext upon which to rest a complaint."

When Dr. Garnett states that "*the* white members of the Society" consulted with "these negro Doctors as far back as June, 1868," his language is not to be taken, we presume, as indicating that none of the white members at or since that date refused to consult with the colored licentiates of the Society; because, in that case, his declaration would conflict with certain testimony before the Congressional Committee, which we quoted in the JOURNAL of March 3d, and a passage from which we shall presently reproduce. Those members who did consult with the parties in question, did so in violation of the rules of the Association, thinking probably such regulations, under the particular circumstances, more honored in the breach than in the observance. We may suggest here, parenthetically, that consultation authorized is not consultation obligatory. The passage we have referred to is as follows:—

"Dr. Augusta, formerly an army surgeon and brevet lieutenant colonel, states that members of the medical society have repeatedly refused to consult with him, alleging as a reason that the laws of the society prohibited them from doing so. He then relates that in June,1868, while in attendance upon a patient, the family desired that Dr. Garnett should be summoned. The messenger who went for him reported that he was out of town, but that Dr. Drinkard, who was in charge of his practice, said that he could not consult with Dr. Augusta, as the latter 'did not belong to his society,' but that he would take the case, which proposition was declined by the family, and Dr. Bliss, well known for his liberal nature, was called in, who consulted with Dr. Augusta, the society to the contrary notwithstanding. Dr. Augusta adds:—Dr. Garnett 'has taken two of my patients while I was attending them, and without any notice to me, except that at my next visit I was informed that Dr. Garnett was attending.'"

Dr. Garnett proceeds thus:—

"The fourth point made is that the negro doctors are excluded from the advantages of taking part in and listening to the discussions of medical subjects in the Society, one of the objects contemplated by the charter being the advancement of medical science, &c.

"We thus learn for the first time that the *Society*, which is required by its charter to meet but twice a year for the election of officers, rested under any obligation to constitute itself a school of medicine for the instruction of any one, white or black. Such discussions as have usually transpired in that body are entirely of a voluntary character, an interchange of professional opinions, reports of interesting cases, and so on, for the mutual benefit and entertainment of its members, entirely independent of any chartered requirements, restrictions or prescribed formulæ whatever, a practice which we can at any moment abolish, when it may be our pleasure to do so, and which we most assuredly should do whenever Congress sees fit to step into the arena."

The discussions, the interchange of professional opinion, and the reports of interesting cases which are usual at medical gatherings, and which have been features of the "Association" at Washington, are of greater or less value according to circumstances. That the negro physicians have been deprived of the benefit of these is tacitly admitted in the preceding paragraphs, and such deprivation seems to us very much of the nature of civil—and uncivil—disability on account of color. The special plea that it is now for the first time learned that the *Society* rested under any obligation to constitute itself a school of medicine for the instruction of any one, white or black, may be answered by pointing to the fact that the gentlemen composing the "Society," when assembled under the name of the "Association" (from which the blacks were excluded by a majority of the ballots cast), took the trouble to interchange their opinions, report interesting cases, and so on. And it would be very uncomplimentary to those scientific utterances to suppose that they were not *instructive* to the white members. Technically, the Society and the Association are to a certain extent distinct. But, between the two, as we formerly said, the practical result has been that certain colored men, having been regularly licensed as practitioners of medicine within the District, have yet been deprived of advantages for professional improvement enjoyed by white physicians in the same place. It is also alleged that they have by the same means, in some instances, lost the benefit of consultations.

The communication concludes as follows:

"I do not hesitate to say that I am unalterably and eternally opposed to all social commingling of the two races, but believe that the line of demarcation established by the Deity cannot be too sharply drawn or too faithfully and jealously observed. Let each go on and work out its destiny in its own sphere, equally protected by the law. A few words, Mr. Editor, in regard to the special charge made against me, and I will trespass no further upon your kindness. The particular instance referred to by the Senator, of my having acted in an unprofessional manner towards one of these negro doctors, occurred in the family of a very old and highly-esteemed colored friend of mine, and to gratify whom I consented to visit the patient alluded to. The circumstances justifying my attendance in that case are sufficiently set forth in the note hereto appended, addressed to me by the father of the patient. It is not necessary, therefore, that I should make any comment except to add that I have never received, nor did I expect to receive, any pecuniary compensation for my attendance.

"Respectfully,

"A. Y. P. Garnett, M.D.

"Washington, March 5, 1870.

"Dr. A. Y. P. Garnett—*Sir:* I answer your request desiring me to give the facts how you came to be called to attend my child during the last day and a half of her life, as you are charged with interfering with Dr. Augusta's practice, and my case cited.

"The morning of the day before my child died, Dr. Augusta left my house, saying he would be back by *noon*. He did not come until about *four*. My child dying and in such great agony, about *two* o'clock I went after you, told you how sick she was, and asked you to come and do what you could, as I did not intend to have Dr. Augusta any longer. You replied that you did not want to interfere, and at last consented to do what you could (as a friend of my brother's and his physician for nearly twenty years). After your arrival you was very particular in what you said, saying Dr. A. and me being colored, your remarks would be construed wrongly; that you thought Dr. A. had done all that could be done (as all doctors lose patients), and you did not intend to criticize his treatment.

"I am sorry, sir, you have been unjustly accused on my account, and shall ever feel grateful for the attention you paid my child, and only regret I did not call you at first, as perhaps my child would not have been so improperly treated. I will also say that you were my physician long before I knew Dr. A. Yours gratefully,

"David L. Watson."

In this concluding portion of his letter Dr. Garnett fully establishes the fact of his kindly interest in the colored family Watson. But there is no denial of unprofessional conduct toward one of the licensed practitioners in question. It is also apparent, *prima facie*, that if the consultation had been accorded the treatment of the patient might possibly have been advantageously modified.

On one point our feelings are too much for us. We must free our mind. We confess to a sense of the ludicrous when we think of the medical man, benevolent but of Caucasian lineage, entering the chamber of the negro patient (who is surrounded by anxious relatives with their sable hue), looking wise over his benignant spectacles, actually feeling the pulse, perhaps even applying the auscultatory ear to the dark-skinned chest, and then refusing as a contamination the exchange of a word of professional advice with the educated African, who has been licensed to practise medicine by the same fraternity which qualified the consulting Doctor as a regular physician in the place of his residence. Do the rules of the association forbid? Make a virtue of necessity, then, and change them! Are we really dealing here with an instinctive repugnance to personal contact or proximity; or is it a question of Brahmin and low caste in the medical department of the Republic of Letters?

Mr. Editor,—I have just received a letter from Prof. Gunn, of Chicago, in which, referring to my article on Reduction of Dislocations, he says, "You are not quite correct in your statement that I limited the principle to the dorsal variety in hip-joint luxations;" and further on, "Is it not more probable that your question related to the application of the principle to luxations of *other joints?*" This was not my question, but from the Doctor's present statement he probably so understood me. I certainly intended doing Prof. G. ample justice, and am very sorry to have misunderstood him, but from the fact that in 1854–5 in his teachings he only spoke of the dorsal and ischiatic luxations in connection with untorn ligament, that these were the only forms illustrated on the cadaver before the class, and that the rules which he then gave for reducing the pubic and thyroid varieties corresponded with those of the books, and furthermore, that in his published paper he used this language:—"This principle can be successfully applied to the *backward* luxation of the femur into the ischiatic notch, and to the *several* luxations of the shoulder" (the italics are mine), I think it not at all strange that I should conclude, what the sentence just quoted seems to imply, that he restricted the application of the principle for one joint and not for the other. In my paper, when I use the term "upward and backward luxations," I include both the dorsal and ischiatic forms of dislocation. It is true that Dr. Gunn's main proposition is stated in general terms both for hip and shoulder, and I am happy to be able to state by his own authority that he did apply the principle much earlier than I supposed to all the displacements of the coxo-femoral articulation. Yours truly,

Wm. Warren Greene.

Portland, March 14, 1870.

Responsibilities of Medical Examiners.—* * * * Physicians should understand that they take a responsibility of a very grave character upon themselves when they examine a risk. To illustrate this, we shall extract from the *Insurance Monitor* some facts relating to the recent suit of the Manhattan Life Insurance Company against Dr. Robert White, of Boston, to recover $10,000 which was paid him by the Company upon life policies issued upon Edward Delaney. These policies were issued in 1863, and were shortly afterwards assigned to Dr. White. About two years after this Delaney died, and the money due on these policies was paid to Dr. White. There were other policies, to the amount of $10,000, issued by another company, and assigned to Dr. White. The ground upon which the plaintiffs sought to recover back this money was that fraudulent representations were made by Delaney in his application for life insurance, and that these representations were made with the knowledge and participation of Dr. White. In answer to the questions in the application, Delaney stated that he was a native of Ireland, was 28 years of age, that he lived in North St., where he kept a saloon. In answer to the question whether he had an habitual cough, he gave a negative answer, and to the question whether he was accustomed to drink liquor, that he "took a drink occasionally, but was strictly sober." The principal grounds upon which it was contended by the company that these representations were false, were that he had had an habitual cough, had raised blood, and exhibited other marks of consumption, and was habitually intemperate.

The plaintiffs called a number of witnesses upon this point, including the wife of Delaney and her two sisters, and the representations of Delaney and the defendant White, in writing, were put in. On the other hand, the defendant called an equal number of witnesses, who testified that they knew Delaney well, and were accustomed to see him constantly, and that he had no habitual cough and was not intemperate.

The case occupied seven days in trial, and was finally decided in favor of the company, to whom a verdict of $12,175·01 was given, being the full amount, with interest.

Though this may be a case with some aggravated features, it is vain to deny that the competition of companies, the solicitations of agents, and the temptation of sharing premiums, or the fear of offending individuals, frequently leads to a less conscientious examination than should be the case. The plan of classifying risks, when properly carried out, would accommodate all and imperil none, and doubtless would be better for all in the long run. In the meanwhile we urge the most uncompromising impartiality in examinations on all physicians.—*Med. and Surg. Reporter.*

A medical friend suggests that this matter of life insurance needs looking into. We suspect it does in more directions than one. But as the point in question, now, is one of dollars and cents to the insurers, we presume that the companies which are themselves sound will learn to receive no medical certificates except from physicians specially authorized to issue them by their own regularly appointed examiners. If they do not protect themselves in some such way, they deserve to lose.

Complimentary Notice of Dr. Durkee's Work on Cutaneous Diseases.—In the *Journal of Cutaneous Medicine and Diseases of the Skin*, edited by Erasmus Wilson, F.R.S., is an extended notice of a book entitled "Contributions to Dermatology," &c., by Silas Durkee, M.D. We quote the opening and closing passages of the review:—

"Silas Durkee is a name thoroughly well known to dermatologists in every part of the world, and not better known than respected by all those who have the good fortune to peruse his writings. That which stands at the head of the present review is a re-print from the pages of the *Boston Medical and Surgical Journal*, and is devoted, as its name imports, to a selection of dermatological subjects, subjects of prominent and very considerable interest."

* * * * * * * *

"We have endeavored to show our appreciation of our colleague, and our estimation of his ability, by the careful digest we have given of his opinions and practice; and we take heart for the progress of practical dermatology when we find able men like Dr. Durkee applying themselves earnestly to the advancement of our science, by the investigation of the common diseases of the skin."

THE report of the Trustees of the Massachusetts General Hospital for 1869, says:—

There has been nothing of special or marked importance in the history of either of our institutions, during the past year. The appropriate work of the Hospital and Asylum has been going quietly and successfully forward, under the able management of Dr. Shaw and Dr. Tyler, with their faithful and valued assistants, aided by the constant supervision, and weekly visitation of the Trustees.

By the report of the resident physician, for the year 1869, we learn the following facts:—

Number of patients in the Hospital Jan. 1st, 1869: paying, 31; free, 96; total, 127.

Discharged during the year, 1392—males, 883; females, 509; as follows:—well, 771—males, 497; females, 274. Much relieved, 125—males, 67; females, 58. Relieved, 227—males, 142; females, 85. Not relieved, 78—males, 44; females, 34. Not treated, 67—males 41; females, 26. Dead, 107—males, 79; females, 28. Insane and eloped, 17—males, 13; females, 4.

Number of patients remaining, December 31st, 1869, 125—males, 72; females, 53. Paying, 25. Free, 100. Medical, 69. Surgical, 56.

Proportion of deaths to the whole number of results, 7.70 per cent.

Number of patients received on account of recent accident, 93.

Out-patients.—Six thousand, nine hundred and fifty-three (6,953) persons have been treated as out-patients, receiving advice, medicine, surgical attendance and dental treatment. Among the cases were 144 of dislocation and fracture, 38 tumors, 125 lacerated and incised wounds, 80 felons, 138 abscesses, 179 contusions and sprains, 114 ulcers, and 22 cases of hip and spine disease. 302 patients have been treated in the Department for Skin Diseases, and 931 have had teeth filled and extracted in the Dental Department. 2,993 were males; 3,960 were females. 3,297 were Americans; 3,656 were Foreigners.

From the report of the Superintendent of the McLean Asylum for the Insane, we take a few passages.

Upon the first of January, 1869, the Register of the Asylum showed the names of one hundred and seventy-six persons—eighty-one males and ninety-five females. During the year there have been one hundred and eight admitted—sixty-four males and forty-four females; making the whole number under treatment two hundred and eighty-four—one hundred and forty-five males and one hundred and thirty-nine females. During the same time there have been one hundred persons discharged—fifty-four males and forty-six females. There are now remaining, one hundred and eighty-four—ninety-one males and ninety-three females.

Of the persons discharged, fifty-one were considered *recovered*—twenty-three males and twenty-eight females. Eight—five males and three females, were *much improved*. Twelve—ten males and two females, were *improved*. Eight—five males and three females, were *not improved*. Three were registered as having had an *insufficient trial*; and eighteen—nine of each sex—have *died*. The weekly average of numbers has been one hundred and eighty-seven.

The proportion of recoveries to the whole number discharged, is larger than usual. The deaths have been fewer than for a number of years. Several of these have been from exhaustion by the uncontrollable excitement of acute disease; the greater number, however, have as usual been the result of chronic insanity.

Mania, reaching in many cases to extreme excitement, has been the prevailing type of disease, just as its opposite, melancholia or depression, has marked the larger number of cases received for a few years previously. We have no epidemic, and very little sickness of any kind, aside, of course, from the ruling disease of the brain. We have been free from any of those accidents to which this fearful disease so often leads. * * * *

In the way of entertainments, we have had several concerts of the highest musical excellence, by amateurs whose names are well known to you. "The Chickering Club" also gave us a very choice out of door concert in the summer. The music was a great pleasure. The kindness which prompted its giving was very grateful to our people. Mr. Moorhouse, to whom we have been often indebted, with his sons, gave us a very interesting concert; and the Mendelssohn Quintette Club also, one which was greatly enjoyed. Prof. L. B. Monroe entertained our household in a very delightful way, during an afternoon, by his reading, and by his illustrations of the perfection and imperfections of the human voice. In the summer we enjoyed several charming excursions in the harbor, by the kindness of Dr. Walker and his Board of Directors. During the cool weather we have had dancing parties, which have given great satisfaction. Many have attended them who did not care to dance, but who loved to look on, or else to enjoy a game of cards at one side. * * * * *

Our thanks are due to the Charitable Mechanic Association for a supply, through Mr. J. P. Bradlee, of tickets to the Fair; and to Dr. J. B. Upham for a constant supply through the year of tickets to the Organ Concerts at the Music Hall; to Mr. Joseph Leonard and to Dr. Durkee of Boston, and to Mr. G. F. Winter of Gloucester, for acceptable additions to our Library, and to Miss D. L. Dix, for music books.

Spinal Irritation.—At a meeting of the Medical Society of the County of New New York, held January 17th, Dr. Wm. A. Hammond read a very valuable paper upon *Spinal Irritation*, which will appear in the *Psychological Journal* for April, and should be read by every physician. We give in brief some of its chief points :—

After alluding to the distrust expressed by several distinguished writers, and shared by a large part of the profession, as to the existence of an independent affection which may properly be called "spinal irritation," the speaker stated emphatically his own conviction that there is such a disorder of the spinal cord, by no means rare or unimportant, and no more to be confounded with hysteria or the various other affections which it may simulate, and to which its symptoms have so often been referred, than with organic disease of the cord. He carefully reviewed the literature of the subject, giving a *résumé* of the more important facts and opinions advanced concerning it, from the introduction of the term by Dr. C. Brown, of Glasgow, in 1828, down to the present time. He then gave his own views, based upon a study of one hundred and twelve cases occurring in his private practice, eighty-three of which had been fully recorded, and twenty-nine less completely.

Symptoms.—(*a*) Centric symptoms :—1. Tenderness at one or more points over the spinal column, increased by pressure. This symptom Dr. H. regards as invariably present, although sometimes developed only by careful examination, and occasionally appearing only several moments after the pressure is applied. Any case which does not exhibit it, he excludes from the category of spinal irritation. Dr. Austin Flint and others think it may be absent in exceptional cases. The tenderness varies in character from a dull ache, seated in the deeper tissues and developed by strong pressure, to a lancinating pain seated in the skin and subcutaneous areolar tissue, and excited by slight pressure. It varies in degree, from a slight discomfort to a hyperæsthesia rendering the touch of the clothing insufferable. It may be limited in extent to the spot under pressure, or the pain may be propagated along the spinal nerves. The seat of the tenderness is most frequently the dorsal region, but may be the cervical or the lumbar, and it may extend over the whole spine. Each location has its characteristic eccentric symptoms. 2. Pain in the cord. The tenderness above described was external to the vertebral canal. The pain now spoken of is in the cord itself, and therefore cannot be excited (unless in a reflex way, through the former) by pressure on the spinous processes; but it may be excited by percussion, and by motion of the spinal column. The pain is commonly felt near the point of external tenderness, but may be distant from it. It was present in one hundred and nine of Dr. Hammond's cases.

(*b*) Eccentric symptoms. These constitute the most noticeable ones, and vary in accordance with the part of the cord irritated. Among those occurring in Dr. Hammond's cases are the following, under their respective regions :—1. *Cervical irritation :* Vertigo, headache, tinnitus aurium, visual disturbance, sense of frontal constriction; tenderness of scalp; mental aberration (more or less marked, in every case); insomnia or excessive somnolence; neuralgic pains and motor disturbance in parts deriving their nervous supply from the affected region—in scalp and face if this were the upper cervical; in upper part of chest and upper extremities, if it were the lower cervical; nausea and vomiting, but *not* gastric pain. 2. *Dorsal irritation:* Gastralgia (in every case), gastric flatulence, acidity, nausea and vomiting, pyrosis; palpitation, cardiac oppression, syncope; dyspnœa, cough; intercostal neuralgia, infra-mammary pain (very frequent); motor disorder (spasm or paralysis). 3. *Lumbar irritation:* Neuralgia of lower extremities, and sometimes of back and abdomen; uterine, ovarian, and rectal pain; strangury; tonic spasm of muscles in lower extremities, clonic spasms (occasional in every case), paralysis. The above symptoms are taken from cases where tenderness was located in but a single region of the spine. In those where it was located in both the cervical and the dorsal region, or both the dorsal and the lumbar, the symptoms presented a combination of those characteristic of each region; and in ten cases where the whole spine was tender, they were quite irregular in their manifestations from time to time.

Causes.—Sex is the strongest predisposing cause, ninety-three of the one hundred and twelve cases being females. Age has its effect—fifty of eighty-three cases being between 15 and 25 years. Hereditary influence was ascertained in some instances. The exciting causes are often impossible to fix. Among those determined in the cases reported are mechanical violence, sexual excesses, mental fatigue and anxiety, innutrition, abuse of alcohol and of opium, exhausting diseases.

Pathology.—The essential pathological condition in this affection, Dr. H. considers to be anæmia of the cord, and he gives *in extenso* his reasons for this opinion. Other writers have attributed the spinal irritation to congestion, inflammation, and many other conditions. That anæmia may cause the irritability, is shown by analogy; and that local anæmias may be produced, is explicable with our present knowledge of the vaso-motor function of the sympathetic. The irritation thus established would seem also to have a secondary influence upon the sympathetic, resulting in the visceral disturbances that constitute so important a feature of the disease. The well-known laws of reflex action suffice to explain the effects of pressure, percussion, &c., and the aberrations of sensation and motility.

The *diagnosis*, after rejecting all cases which fail to present the vertebral tenderness, lies between this affection and the other spinal diseases which in their earlier stages may resemble it—chronic myelitis, meningitis and congestion. An early and correct diagnosis is of the greatest moment as a guide to treatment, the indications for which in spinal irritation are quite the reverse of those in the other affections. In a matter of such vital importance we shall not attempt the imperfect abstract our limits would compel, but refer the reader to the paper itself.

The *prognosis* is favorable, all cases being alleviated by persistent treatment, and nearly all being ultimately cured.

Treatment.—The indications are four:—"1. To remove the cause. 2. To improve the general tone of the system. 3. To increase the amount of blood in the spinal cord, and improve the nutrition of this organ. 4. To set up a counter-irritant action in the vicinity of the disordered region of the cord. The first indication speaks for itself. The second is met by tonics (as iron, quinine, zinc, cod-liver oil), and especially by alcoholic stimulants. The third, by strychnia, phosphorus, phosphoric acid, opium, heat to the spine, the recumbent posture, and above all the direct (galvanic) current scientifically applied. (The induced current also is of service, applied to the affected muscles where paralysis is present.) Of counter-irritants, blisters and dry cups are to be preferred to antimonial ointment. Wet cups or leeches are inadmissible.—*N. Y. Medical Record.*

Staff Rank in the British Navy.—In the *Army and Navy Journal* of the 26th inst. there appeared to be what purported to be an exact statement of the number and rank of medical officers of the navy of Great Britain. By referring to a recent number of the British Navy List we find there are discrepancies in the statements of the *Journal* as compared with those of the official list. For instance, the *Journal* omits entirely 174 surgeons with the rank of Lieutenant-Commander. It also omits to mention that the Director-General of the British Naval Medical Department has the rank and emoluments of a Vice-Admiral. We have a carefully prepared list of the medical officers of the British navy with their rank and pay (in part) as compared with the line of that service. It is as follows:—

Rank and numbers of the Medical Department of the British Navy, corrected to July, 1869.

Sir Alexander Armstrong, M.D., director-general of the medical department of the navy, with the rank of admiral.

Seven inspector-generals of fleets and hospitals, ranking with commodores of the first class, and after three years' service as such, ranking with rear-admirals.

Fifteen deputy inspectors of hospitals and fleets, with the rank of captains, and after five years' service as such to rank with commodores of the second class.

Ninety-seven staff surgeons, with the rank of commander. Pay $2,190 in gold per year, ashore or afloat. When serving on the flag-ship of a rear-admiral, $1.25 per day in gold additional. Pay of a commander, with whom the staff surgeon ranks, $2,165, *including* table and command money. Pay of staff surgeon of twenty-two years' service, $2,460, with $1.25 per diem, in gold, additional when serving on board a flagship.

One hundred and seventy-four surgeons with the positive rank of lieutenants of eight years' standing, corresponding to the rank of lieutenant-commander in the United States Navy, and taking precedence on *all occasions*, according to date of commission, except when the line lieutenant is in *actual command* of the ship. Pay of the surgeon, $1,595. After fourteen years from entry into the service, $1,815. Pay of lieutenant of eight years, with whom the surgeon ranks, $1,135. No increase except in actual command of a ship.

Eighty-six passed assistant surgeons, holding positive rank according to date of commissions with lieutenants of under eight years' service as lieutenants. Pay of passed assistant-surgeons, $1,140 in gold. Pay of the lieutenant with whom he ranks, $910 a year in gold.

One hundred and fifty assistant surgeons, with the rank of sub-lieutenants, corresponding to masters in the United States navy, and taking precedence with line officers according to date of commission. Pay of assistant-surgeons, $910 in gold per year. Pay of the sub-lieutenants, with whom they rank, $500 per year in gold. Sub-lieutenants are steerage officers, assistant-surgeons are ward-room officers.

There are over one hundred vacancies in the medical corps of the royal navy. In the medical corps of the United States navy, numbering only two hundred of all grades when full, there are now fifty-four vacancies, over one-fourth of the whole corps, and it is impossible to fill them with competent men, owing to the humiliating position in which they are placed by the regulations of the service. In the British navy on board ship, the officers take choice of state rooms according to rank, and "line and staff" are harmoniously blended on both sides of the ward room. In the navy of the United States, the "starboard," or right hand side, is considered the most exclusive and the post of honor, and is occupied wholly by the *line* officers, while the "staff" are compelled to occupy the "port" or left side of the ship. In the royal navy all officers take rank according to date of commission, and on board ship the commanding officer, *i.e.*, the senior line officer on board, takes precedence of all others, but the executive officer or first lieutenant does not take precedence of staff officers unless he be actually their senior by date of commission. In the United States navy the ship is saddled by an "executive officer," in addition to the commanding officer, who, even though he rank as an ensign only, takes precedence over all the "staff" officers on board regardless of their rank, age and length of years they have served in the navy, thus fully realizing what General Sherman in his recent letter to Admiral Porter considered as objectionable, "two captains on board one ship." The navy of republican America clings to class distinctions long since discarded in the Royal Navy of Great Britain. All this should be done away with.—*Boston Daily Advertiser.*

CHLOROFORM.—Dr. Simpson says that his recent case of death from chloroform is the first which has proved fatal in his practice. Death from asphyxia, or from syncope, may occur in some cases. Dr. Simpson says, death from asphyxia can generally be averted by at once arresting the inhalation of the drug whenever the breathing becomes noisy or stertorous. Death from syncope is far less under control, and has, apparently, been the cause of the majority of the fatal issues mentioned in the journals. Before the introduction of chloroform, patients sometimes died of syncope on the operating table. He gives many where even slight operations, such as opening abscesses, have been followed by death before the introduction of chloroform. Hence, he argues, that probably the fatal terminations in some cases of chloroform are not *always* to be ascribed to the inhalation of the drug. At the various drug manufactories in Edinburgh, upwards of two millions of doses of chloroform are manufactured yearly. Dr. Simpson asks whether there is any other potent drug which could be administered with so few fatal results.—*Dublin Medical Press and Circular.*

Acute Ranula.—At a recent meeting of the Société de Chirurgie, M. Bouchard related a case of "acute ranula." A woman eight months advanced in pregnancy, while swallowing a glass of wine, felt a tumor suddenly form in her mouth, which in a few minutes had acquired a size sufficient to obstruct the passage of air and threaten asphyxia. He found her in that condition, having both sides of the supra-hyoidean region greatly distended, and with a tumor the size of a large fowl's egg, thrusting back the tongue, and filling the cavity of the mouth, excepting at a small space on the left side. The tumor was livid and fluctuating, and seemed to be caused by effusion under the mucous membrane. On making an opening into it with scissors, the discharge of a considerable quantity of white-of-egg fluid showed that the tumor really was an example of acute ranula. M. Forget, reporting on the case, said that he had also met with a similar case in a lady who, while eating, became the subject of a swelling, which prevented her swallowing, and impeded respiration. On examination he found the buccal floor raised up, but especially along the left side, giving it very much the appearance of a highly distended finger of a glove. A puncture discharged an albuminoid fluid, and restored the normal movements in the parts. The patient had already experienced the same accident while eating three times within six months, but not to the same extent, the inconvenience caused being slighter, temporary, and disappearing spontaneously. In order to prevent the reappearance of the tumor, M. Forget followed up an extensive incision of the wall of the cyst with cauterization by nitrate of silver several times repeated. According to the researches of M. Tillaux ranula is due to the dilatation of one of the secreting conduits of the sublingual gland, which had become obstructed; but M. Forget does not regard this gland and its appendices as the exclusive seat of ranula, which may arise in the canals of the submaxillary and parotid glands, which, like those of the mammary gland, and, indeed, all glandular apparatus, may undergo considerable dilatation.—*London Medical Times and Gazette.*

DEATHS FROM CHLOROFORM—*UNREPORTED.*

In reckoning up the awful count against the use of chloroform, authors are too apt to forget that unrecorded cases are, possibly, even more numerous than recorded ones. Thus, in the last five years, several have come within the knowledge of the writer in this city, which have never been reported, whilst he does not know of a single recorded case. These remarks were suggested by the following, published under the head of "Two Unreported Deaths from Chloroform," in the *Pacific Medical and Surgical Journal* for July :—

Stockton, Cal., June 22, 1869.

Dr. Henry Gibbons, Jr.,—*Sir :*—In your report of fifty-seven cases of deaths from chloroform, you refer to the Surgeon General's Circular, No. 6, wherein it appears that seven deaths were all that occurred under chloroform in the army. There is a mistake somewhere, in the omission of one other case, which was reported by Surgeons Sabine, Bond and myself, who were of the operating corps at that time. It occurred in the summer of 1863, in front of Atlanta, Georgia. The patient was a robust soldier, belonging to the 76th Ohio Infantry, aged about 30. He was to undergo an amputation of a portion of one hand. Chloroform was given in the usual way. He had not taken more than six inspirations before the breathing became difficult and stertorous; the pulse ceased, and in a few moments he was dead. Artificial respiration and all other means tried were of no avail. A *post mortem* the next day revealed nothing. Death was thought to be owing to paralysis of the heart. A. T. Hudson, M.D.

In a recent conversation with Dr. E. Bently, U.S.A., in regard to "unrecorded deaths from chloroform," he mentioned the particulars of a case which came within his knowledge while in private practice in the summer of 1855. A strong, robust man, aged about 40 years, who indulged in occasional fits of intemperance, fell and dislocated the head of the humerus. Three days after—the patient meanwhile becoming quite sober—the physician in attendance sent for Dr. Bently to reduce the dislocation, and while the latter was making proper preparation, chloroform (amount not known) was poured upon a sponge and held to the nostrils. After a few inhalations, unconsciousness ensued, and with the heel in the axilla, the head of the humerus was replaced with an audible snap. Immediately thereafter the face became livid and death took place from asphyxia.—*Half-yearly Comp. Med. Sci.*

Medical Miscellany.

Moral Paralysis.—Dr. Faust learns through Mephistopheles that some of the newspaper cases of alleged involuntary chloroformization might be called instances of *moral paralysis.*

A distinguished practitioner at home, complains that an eminent physician abroad did not, in certain remarks upon chloroform, sound the superior praises of ether; and the gist of the reply is that the Boston monument lacks an inscription. —*N. Y. Medical Gazette.*

Unjust to both parties! Do please, Brother *Gazette, read* the controversy!

Detection of Chloroform in the Cadaver.—Dr. Thomas Stevenson, in *Guy's Hospital Reports* (*Half Yearly Abstract*), refers to a death from inhalation of chloroform, the patient being a powerful, muscular man, who was to have the tendo-achillis cut for deformity. He took it at his own request, though, as it was afterwards ascertained, he had nearly died eight years before from inhaling it. The solid and fluid parts of the body were subjected to analysis in order to detect chloroform. The process of Duroc was employed, by which the chloroform is decomposed into chlorine, hydrochloric acid and other products, and the two first named substances are absorbed by nitrate of silver, giving rise to white chloride of silver. The result showed the presence of the agent. Dr. S. remarks that this is the only English case that he knows of where chloroform was detected in the human body after death by inhalation—a statement which may be considered in connection with the discussion on the subject by the San Francisco Medical Society, as reported in the present number of the Journal.—*Pacific Medical and Surgical Journal.*

Varicose Dilatation of Lymphatics.—M. Trelat has recorded a remarkable case of varicose dorsal lymphatics of the penis, which arose as follows:—A healthy man, aged 26, accidentally struck severely the dorsum of the penis against the corner of a table. The contusion was followed by dense œdema of the organ and of the scrotum. Several little tumors formed, with some relief to the pain, and on opening them a jet of fluid appeared, which, both to the naked eye and on microscopic examination, proved to be lymph, showing that a remarkable dilatation of the lymphatic vessels had taken place, tantamount, in fact, to a varicose condition.

Such a condition has been previously noticed by Ricord, Demarquay, and others, and specially commented on in the thesis of M. Binet.—*Dublin Medical Press and Circular.*

Warning to Medical Practitioners.—A pupil in one of the Dublin hospitals, having occasion a few days ago to apply strong nitric acid to a diphtheritic surface, employed as the medium a piece of lint which had previously been used with carbolic acid, and which he supposed to have been thoroughly cleansed by subsequent washing. No sooner, however, had the lint been dipped in the nitric acid, than a violent explosion took place, severely burning the operator's face. We are happy to hear that no serious consequences are likely to result, though these were at first apprehended, but the occurrence is instructive, and worth recording as a caution in dealing with such agents.—*London Medical Times and Gazette.*

Members of the profession interested in Diseases of the Eye are invited to visit the Ophthalmic Clinique of the Boston City Hospital, at their convenience, on Mondays, Wednesdays and Fridays, from 9 to 11 o'clock.

Henry W. Williams, M.D., *Oph. Surgeon.*

To Correspondents.—Communications accepted:—Tetanus—Exophthalmos, &c.—Cold Water in Typhoid—Injuries of Membrana Tympani—Position of Fœtus in Utero—Chloral in Chorea Hysterica—Ovaritis—Lesions of Base of Brain—Feeding Babies.

Book Received.—A Practical Treatise on the Diagnosis, Pathology and Treatment of Diseases of the Heart. By Austin Flint, M.D. Philadelphia: Henry C. Lee. 2d Edition. Pp. 550.

Deaths in nineteen Cities and Towns of Massachusetts for the week ending March 19, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases. Consumption.	Pneumonia.	Scar. Fev.
Boston	105	15	15	3
Charlestown	7	5	1	0
Worcester	11	2	0	0
Lowell	18	5	3	1
Milford	1	0	0	0
Chelsea	10	2	1	1
Cambridge	15	3	2	0
Salem	12	4	2	1
Lawrence	10	2	0	0
Springfield	10	2	0	0
Lynn	7	2	0	0
Pittsfield	1	0	0	0
Gloucester	8	2	0	0
Fitchburg	4	1	0	0
Taunton	7	1	2	3
Newburyport	4	2	1	0
Somerville	6	1	1	0
Fall River	11	2	2	0
Haverhill	3	1	0	0
	250	52	30	9

Lowell reports two deaths from smallpox. Worcester reports one death from smallpox. Boston reports one death from smallpox. Seven deaths from measles are reported, of which number four were in Lowell. From all the above places there are reported eight deaths from croup, three from diphtheria, six from erysipelas, and four from typhoid fever.

George Derby M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending March 19, 105. Males, 52—Females, 53.—Abscess, 1—inflammation of the bowels, 2—congestion of the brain, 2—disease of the brain, 2—inflammation of the brain, 2—bronchitis, 4—cholera infantum, 1—consumption, 15—convulsions, 5—croup, 4—cyanosis, 1—debility, 3—diarrhœa, 2—diphtheria, 1—dropsy, 1—dropsy of the brain, 3—dysentery, 3—erysipelas, 3—scarlet fever, 3—typhoid fever, 3—gastritis, 2—hæmorrhage, 3—disease of the heart, 5—disease of the kidneys, 4—congestion of the lungs, 2—inflammation of the lungs, 13—marasmus, 1—measles, 1—noma, 1—old age, 1—paralysis, 2—premature birth, 2—smallpox, 1—disease of the spine, 1—suicide, 1—teething, 1—unknown, 3.

Under 5 years of age, 48—between 5 and 20 years, 7—between 20 and 40 years, 24—between 40 and 60 years, 12—above 60 years, 14. Born in the United States, 78—Ireland, 16—other places, 11.

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MUSCULAR EXCISION, AS AN AID TO DIAGNOSIS.

BY J. F. A. ADAMS, M.D., Pittsfield, Mass.

THE affections characterized by atrophy of muscular tissue, which have heretofore been but imperfectly understood, either as to their true nature or proper treatment, seem now to be emerging from the dim regions of the unknown, and, thanks to the patient and profound researches of recent investigators, to be taking position in the ranks of the known. The observations, both clinical and pathological, in this direction, have been abundant, and abundantly recorded. To undertake any general review of them is not the object of this paper, which is simply to call attention to the mode in which the pathology of these diseases has been made to bear directly upon the diagnosis, by means of the excision of muscular tissue, during life. This opens to the clinical observer an invaluable source of knowledge, and renders the trocar and scalpel almost as useful in medical as in surgical diagnosis.

For the removal of muscular tissue for microscopic examination, various instruments have been devised. Four small trocars for this purpose are described and figured by Dr. Keen, in the *American Journal of the Medical Sciences* for Oct., 1869. Two of them, namely, Duchenne's and Noeggerath's, he has found to be valuable and reliable instruments. Duchenne's is also figured and highly praised by Dr. W. A. Hammond, in a note on Organic Infantile Paralysis, in his translation of Meyer's Medical Electricity. Noeggerath's instrument has also been described to me by Dr. Robert Amory, of Brookline, who saw it successfully used in Paris, three years ago. With the former of these, a bit of muscular tissue becomes included in a small opening, at the side of the instrument; and, with the latter, it is grasped by a pair of hooked points protruded from its open extremity, after introduction. In either case, a small puncture is the only wound inflicted.

This method of diagnosis was used in two cases by myself, in Jan., 1867, when an interne at the Boston City Hospital; but, as I knew of no specially-adapted instrument, the scalpel was employed. The operation was made nearly painless, by freezing with rhigolene; an incision, an inch in length, was carried through the skin and subcutaneous fat, to the muscle, a portion of which was pinched up by the forceps, and removed with a scalpel. The wounds healed, by first intention. This mode of procedure takes a little more time, and appears more formidable to the patient, than the simple puncture with a slender trocar, and must therefore be less desirable in a majority of cases; but, if the skin be well frozen, it is not more painful, and possesses the advantages of showing the depth of subcutaneous fat, giving a view of the surface of the muscle, allowing the removal of a larger portion, and ensuring the certainty of obtaining muscular and not adipose tissue. The advantages, therefore, are not all on the side of the trocar.

The knowledge to be obtained from muscular examination, is, in certain cases, of the greatest value, confirming a diagnosis, or settling a doubtful one. It is especially useful in cases of muscular atrophy, by helping us to determine whether this is due to disuse from paralysis of motor nerves, or is a special nutritive lesion of the muscles themselves. In trichiniasis, also, its value is obvious.

The cases referred to at the Boston City Hospital occurred in the service of Dr. J. N. Borland, who kindly permits me to use them here, in illustration. The muscular excision and examination were made by me, with his consent. Both cases were also under the care of Drs. W. W. Morland and F. E. Oliver, during their visiting terms.

CASE I.—*Progressive Muscular Atrophy.*—C. W. P., miner, bachelor, æt. 34. Admitted to Hospital, Sept. 1st, 1866. Is naturally a strong, robust man. Has had, at several times, slight attacks of rheumatism; his father and a brother and sister have also had rheumatism. The present illness came on in December last, when working in the gold mines of California. Was then exposed to changes of temperature and frequent wetting of feet. The ankles first became swollen and painful; and, since then, the knee joints and arms have been affected in the same way, but without fever, at any time. From pain and swelling of the arms, he has, at times, been unable to raise the hands to the head. With the first symptoms of pain, emaciation commenced, and has progressed slowly, but persistently, up to the present time. His weight, in health, is 164 pounds, and, at present, 120 pounds. Now has great loss of muscular power, throughout the whole body. In the hands, arms, and legs, deep hollows are seen at the points which are normally filled with muscular substance. This is very striking in regard to the thenar and hypothenar eminences of the hand. The face, however, shows no emaciation. Ankles are somewhat painful, but not swollen. At night, they are the seat of sharp, aching pain, and a sensation "as if they would burst." Has had no cough, pain in chest, nor sensible cardiac symptoms. Bowels are usually regular, but now relaxed; three dejections in last twenty-four hours. Urine free and normal; appetite good. Is now in bed, from preference, but sits up every day. Pulse 68. Tongue quite clean. No blue line on gums. Lung and heart sounds normal. Sensation normal, over whole body; motion greatly impaired, apparently from muscular weakness alone. No symptoms of any disease of nervous centres. Muscles respond feebly to reflex excitation, and retain electric contractility, in a lessened degree.

Placed upon iodide of potassium; and faradization from the magneto-electric battery ordered, to lower limbs.

Sept. 13th.—Diarrhœa, checked by chalk and opium.

15th.—Complains of pain, extending from the lumbar region, round the left side, to umbilicus. No spinal tenderness.

18th.—Strength improved.

Nov. 11th.—Diarrhœa, lasting four days.

25th.—Iodide of potassium suspended, and the following prescription substituted:—

℞. Ext. nucis. vom., gr. vi.
Ferri sulph. ex., gr. xij.
Quin. sulph., qr. vi.
Syr. simp., q. s.

M. Ft. pil. No. xij. One pill to be taken three times a day.

26th.—Slight muscular twitchings; dose of yesterday diminished one half.

27th.—No twitching. A papular eruption observed, on the left shoulder.

Dec. 6th.—Functions, in all respects, well performed. During the last three days, has felt increasing strength, with greater freedom of motion.

20th.—Complains of erotic sensations in the night. Pills of nux vomica suspended; and pil. ferri. carb. given, in 5 gr. doses, thrice daily; also, bromide of potassium ℈j. at bedtime.

Jan. 8th, 1867.—Three loose dejections yesterday, checked by a simple opiate.

11th.—A portion of skin over the lower third of left biceps being frozen by rhigolene, a longitudinal incision, an inch in length, is made down to the muscle, which is very small, but not less firm in texture than normal. Subcutaneous fat one-half inch in thickness. A small portion of muscular tissue being removed by the scalpel, and washed free of blood, is found to be of a pale, yellow color. Under the microscope, the following elements are observed:

1st. Striated fibres, pale, but healthy.

2d. Striated fibres, containing a greater or less proportion of granular matter and oil, within the sarcolemma.

3d. Fibres, consisting only of sarcolemma, stuffed with granular matter and oil globules, and with no trace of transverse striation.

4th. Diffused oil globules, of varying size, lying upon the fibres, outside of the sarcolemma.

5th. Diffused granular matter, not confined by sarcolemma.

Some of the fibres being teased at their extremities, so as to show the primitive fibrillæ in brush-like form, the sarcous elements are seen, in some cases, to be normal, while in others they are mere granules, still retaining their position in the fibrils.

About half the tissue consists of Nos. 1 and 2.

Powerful currents from Farmer's thermo-electric battery ordered twice daily, to upper and lower limbs.

Jan. 16th.—Three loose dejections, with abdominal pain, last night.

27th.—Weight 120 pounds.

Feb. 2d.—Increased warmth and muscular strength in left foot.

11th. — Improvement in sensation of health.

17th.—Complains of soreness of muscles.

19th.—Sensation of increased strength in thighs.

21st.—A feeling of soreness in neck and left chest, as if from over-work. Apparently an increased body to anterior muscles of thighs and arms.

26th.—Pil. ferri carb. suspended, and iodide of potassium given instead, in 5 gr. doses.

March 17th.—Feeling of increased health, mentally and physically.

23d.—Weight 121 pounds, being a gain of one pound in six weeks. Walks better than at any time during illness.

April 11th.—A moist, cloudy morning. Feels better, as is usually the case, on such days.

24th.—Complains of a prurient, papular eruption about shoulders. The quadriceps extensor femoris apparently gaining in size and strength.

May 21st.—Soles of feet have the abnormal sensation of slipping away from him. This was first observed two weeks ago, and is increasing.

May 24th.—Diarrhœa, with pain.

26th.—Complains of pain under left nipple, shooting through to back. Relief afforded by a sinapism.

July 3d.—Has, at times, troublesome palpitation of heart. Erotic tendency considerably increased, during past few days. Hoffman's anodyne ordered, ʒj. three times a day; and bromide of potassium, ℈j. at bed time.

27th.—Ferri et quiniæ cit., gr. v., to be taken thrice daily.

August 1st, 1867.—*Discharged*, "not improved," and sent to Tewksbury State Almshouse.

The superintendent of that institution kindly informs me that the patient remained there until Oct 14th, 1868, when he was discharged, to go to New Brunswick. While at Tewksbury he improved somewhat, and he has since written from New Brunswick that he was much better, and felt hopes of an entire recovery.

In this case, the symptoms and march pointed to *progressive muscular atrophy*; and this diagnosis was verified by the muscular excision, which revealed the lesion characteristic of that affection. The degeneration, partly granular and partly fatty, affecting certain fibres, which are interspersed among healthy ones; and the gradual conversion of sarcous elements into granules, are quite pathognomonic, answering to the descriptions of Cruveilheir, Duchenne, Merym, Roberts and others. Without attempting any general review of the case, a few points demand passing notice.

Concerning the *mode of onset*, we find that the disease commenced, according to the patient's statement, with pain and swelling of the ankles, and afterwards of the knee-joints and arms. After his admission to the Hospital, there was a sensation in the ankles "as if they would burst." Now, a painful access is so rare as not to be mentioned by Duchenne, in his classical description; but it is specially mentioned by Jaccond, since articular and muscular pains ushered in the case which he takes as the text for his admirable lectures on this subject, in his "Leçons de Clinique Médicale." Meyer speaks of "tearing pains, which at times have their seat in the joints, at times follow the path of certain nerves, at times are diffused." But *swelling* seems not to belong to the disease, at the outset. It has been observed, a few times, in the later stages; but not, so far as I can discover, at an early period. Possibly, there was only a *sensation* of swelling, as was the case when the patient entered the Hospital; or, more probably, there was true swelling, due to superadded sub-acute rheumatism. Seventeen months after the commencement of the disease, appeared the first and only lesion of sensation, namely, a feeling as if the feet were slipping away from him. This is also a rare feature, although anæsthesia is mentioned among the possible symptoms by both Duchenne and Benedikt. This symptom and the erotic tendency are suggestive of *progressive locomotor ataxy*; but there was an absence of the peculiar walk and of any affection of sight, while the erotic symptoms did not lead to spermatorrhœa.

Concerning the *treatment* of this case, it was observed that, when faradization was thoroughly employed, marked improvement followed; and that retrogression attended its suspension. This coincides with the teachings of Duchenne, who has succeeded in curing the disease by this agent. The galvanic spinal-nerve current recommended by Meyer, and the galvanization of the sympathetic preferred by Remak, were not employed.

As to the seat of the primary lesion in this case, the absence of an autopsy prevents anything definite from being said. While Merym contends that it is seated in the muscles themselves, a long list of observers have furnished cases in which degenerations of the spinal cord or its anterior roots were discovered; and Jaccond argues most ably for the sympathetic system, as the true seat of the disease, adducing the case of Schneevogt and two of his own, in which lesions of that nerve were demonstrated.

Case II.—*Paraplegia.*—A. N., spinster, æt. 28, tailoress. Admitted to Hospital Sept. 29, 1866. Has always had good health till last spring, when she suffered from a cough, with white, frothy sputa, for two months, without emaciation, but obliging her to leave off work for a time. During the summer she was well, till nine weeks ago, when cough again came on, and she soon began to feel weak and run down, and to suffer from profuse night sweats; but the cough has now been absent for three weeks. Five weeks ago, being at a catamenial period, she got her feet wet, and menstruation was arrested. A few days after, in attempting to walk across the room, her limbs gave way, and she fell to the floor. From that time she has been unable to walk, or to move the lower limbs, even when in bed, without the aid of the hands. On moving them passively, much pain is felt in the popliteal space. Has constant formication below the knees, burning sensation in the feet, and slight anæsthesia. None of these symptoms were noticed before falling. Has had no cramps, twitchings of the limbs, nor pain in the back. Urine is high colored and smells strongly, and micturition is attended with scalding. Bowels constipated. Catamenia always regular till the present paralysis came on, since which time she has not menstruated. No leucorrhœa. Never has had dyspepsia nor palpitation of the heart. No pain in chest; appetite good; much thirst.

On examination, slight tenderness is found over the last lumbar vertebra. Reflex and electro-muscular contractility absent in the lower limbs. Prolonged expiration and broncophony at apex of right lung behind. Respiration rather obscure under both clavicles. Resonance, on percussion, normal.

Oct. 1st.—Pulse 100. Tongue a little coated. Had much pain in the lower limbs last night. Some hyperæsthesia last evening, and twitching yesterday, for the first time. Placed upon tonic treatment, and faradization from the magneto-electric battery applied twice daily to the lower limbs and back.

During the next two months there was improvement in the phthisical symptoms, but none in the paraplegia.

Dec. 1st.—On pressure over the spine, tenderness is found to exist over the 4th, 5th, 11th and 12th dorsal and all of the lumbar vertebræ, most marked over the 5th and 11th dorsal and 3d lumbar. A hot sponge gives no pain in any part of the spinal column; but, when applied over 5th lumbar vertebra, a sensation of heat is felt in the sole of the right foot.

Jan 21st, 1867.—By the aid of rhigolene and the freezer, an incision is made over the outer edge of the right soleus, which is considerably diminished in size. A portion of muscle being excised, is found, when washed, to be of a pale, yellowish-red color. On microscopic examination, the muscular tissue is found completely degenerated, showing neither transverse nor longitudinal striation; and sarcous elements are nowhere to be found. The sarcolemma is loosely filled with oil-globules and granular matter, which elements are also diffused among the fibres, with much white, fibrous tissue.

After this time the lower limbs were subjected, twice daily, to powerful shocks from Farmer's thermo-electric battery, under which muscular irritability was gradually restored, and then muscular power steadily acquired.

Feb. 12th.—Feels as if she had some slight control over paralyzed muscles.

May 25th.—Made first attempt at walking.

June 8th.—Walked the whole length of the ward by taking hold of the bedsteads, and was then discharged, "much improved."

The phthisical symptoms entirely disappeared during her stay in the hospital. I was no longer there when she was discharged, and it does not appear, from the record, what nervous symptoms then remained, nor whether menstruation had been restored.

For an interesting sequel to this case I am indebted to Dr. Borland, who writes me that he was called to see the same patient the winter after she left the hospital. She had entirely recovered from the paralysis, and had been strong enough to walk for miles; but was then having a few symptoms which made her fear a return of the affection. She informed him that she was married, and had been so before entering the hospital, but for some reason had not wished to make the fact known.

In this case we find a somewhat peculiar, not to say perplexing, grouping of symptoms. The sudden access of the paraplegia, following a suppression of the menses, from wetting the feet, without pain in the back or limbs, convulsive movements, or general symptoms of hysteria, argues for a reflex uterine paraplegia. The disease once established, the completeness of the acinesia, the marked lesions of sensation, muscular twitchings, and absence of reflex excitability, suggest chronic inflammation, or, at least, hyperæmia of the cord; while the complete recovery tends to indicate that the cord had not sustained any profound organic lesion. The condition of the muscular tissue examined was that of extreme fatty degeneration, which, while differing from the ordinary appearance of the muscle in progressive muscular atrophy, was as complete as is reached in the latest stage of that disease, and a disorganization which would naturally be considered irreparable. The degeneration was evidently due to five months of complete disuse; and the only way in which we can account for the ultimate recovery is by presuming that this condition was limited to certain muscles or parts of muscles. The ready improvement, under powerful faradization, suggests that the atrophy had outlived the nervous lesion. The most rational explanation of all the symptoms seemed to be that the paraplegia was reflex at first; but was complicated with hyperæmia, or even inflammation of the cord. The spinal tenderness, very slight at first, and gradually developing to a considerable degree, tends to support this opinion. This, however, is at variance with the view of Brown-Séquard, who considers reflex paralysis as due to anæmiating arterial spasm in the cord, with which congestion is, of course, incompatible; but Handfield Jones, in his Lumleian Lectures for 1865, argues very strongly against this theory, and assumes, in its stead, an exhaustion of nerve-fibres, from excessive irritation, independent of any circulatory changes. The muscular examination, in this case, although not possessing the pathognomonic value which it did in the first, was yet of great assistance, and afforded the indication for increased energy of faradization, by which means a restoration to health was finally accomplished.

EXOPHTHALMOS, WITH INTRA-CRANIAL DISEASE. DEATH. AUTOPSY.

By Henry W. Williams, M.D., President of the Amecan Ophthalmological Society.

August 9th, 1869, I related to the Boston Society for Medical Improvement a case of exophthalmos, in which the diagnosis, that the symptoms resulted from pressure from an intra-cranial tumor, was verified by autopsy. I had at that time under my observation another, similar, case, in which the diagnosis has had a like confirmation, and of which the following is the history.

June 30th, 1869, I saw, at the City Hospital, Mrs. ——, a large, healthy-looking, middle-aged woman. She said she had always been well until the last winter, when she began to have pain at the vertex of the head, running down towards the left eye. At times the head has been sore on combing the hair, and she has also had a feeling of soreness and stiffness when she moved her head.

In April, she first noticed that the left eye was being pushed forward, and that sight began to fail in this eye. The protrusion gradually increased, until the eye seems now nearly forced from the orbit, and vision is wholly lost.

The patient has had severe neuralgic attacks, and her appetite has gradually failed; but she has had no paralysis or loss of sensibility.

The left eyeball is very slightly injected, and is not sensitive when pressed upon. Pupil largely dilated and insensible to light.

Ophthalmoscopic examination shows nearly complete obliteration of the retinal arteries, much congestion of the veins, and small hæmorrhagic effusions scattered everywhere in the retina.

The probable existence of a tumor within the head, and its fatal tendency, was explained to the friends of the patient, and she was advised to continue under the care of her physician, Dr. O'Connell.

Three weeks after this examination of her condition she had an attack of hemiplegia, and when visited by my assistant, Dr. Clark, she was found to have complete loss of motion on right side. Sensation normal. The eyeball protruded less than when seen at the hospital. No ophthalmoscopic examination. The mental faculties were affected in some degree; she was absent-minded and unable to remember anything. The bladder and rectum were not completely paralyzed, but acted sluggishly.

The patient gradually failed, until her death, which occurred about a year from the time of the first manifestation of cerebral symptoms.

The autopsy was made Dec. 24th, 1869, by Dr. John Homans, in presence of Drs. O'Connell, J. O. Green and myself. Head only examined. A morbid growth, not above the size of a filbert, was found in the right side and middle of the pons Varolii, extending a little into the left side. Left optic tract involved in a morbid growth of similar size and appearance. Left optic nerve, anterior to the commissure, softened, and its tissue almost broken down. Outer anterior portion of left optic thalamus softened and grumous.

Microscopic examination of sections of the tumors showed them to be made up of small cells, with very little connective tissue.

There was not in this case, as there was in the other above mentioned, any pressure from a tumor within or behind the orbit which could have directly caused the protrusion of the eyeball.

SEVERE CASE OF TETANUS CURED BY EXSECTION OF A NERVE.

By George E. Foster, M.D., Springfield, Mass.

M. L., aged 24; married; by birth an American, and by occupation a seamstress; bought a pair of shoes July 20th, 1869, and put them on; while walking, she felt a sharp substance pricking the skin of the anterior and interior aspect of the right heel. She continued to walk, but with pain, until she stepped from the curbstone to cross the street, when accidentally her whole weight was thrown on to the heel and something was driven into it which caused exquisite pain. She called a carriage which was passing, and rode to her residence. Upon removing the shoe, a shoe-nail was found driven into the heel, the end protruding. A shoemaker who lived near was called; he removed it with pincers, and upon examination found it to be whole and one inch and a quarter in length. The pain subsided and the wound healed, leaving no trace of the injury. No more was thought of it until Aug. 3d, at 12 o'clock, when she awoke in the night with chills, stiffness of the limbs and slight twitchings of the muscles of the arms. Chafing and hot drinks were resorted to by the family, but without changing the symptoms. At 3, A.M., the family physician was called; at that time, she had spasms of all the limbs, and well-marked trismus, mind clear, pulse full. He tried all the remedies that could be thought of, but she became worse very fast, and at 8, A.M. another physician was called, who pronounced the case hopeless. The Doctor in charge not willing to give up, they sent for me, but being out of town I did not see her until 12, M. She was then very weak, spasms constant, trismus well-marked, pulse 97 and very feeble, mind perfectly clear. All the known remedies were again tried, but with no better result. She could give no cause for the attack. The physician in attendance, while conversing, accidentally spoke of the accident three weeks before, and the family exhibited the nail, which was whole, but upon examination a slight spot of rust was found near the point. A subcutaneous injection of a solution of the sulphate of atropia was made over the posterior tibial nerve, but without relief. At 4.30, P. M., she being under the influence of ether, I cut down upon and with care removed about two lines of the internal plantar nerve; hot cataplasms of flaxseed, yeast and laudanum, were ordered, to be applied once every hour and a half. Pulse one hour after the operation was 45 and fluttering, pupil of right eye fully dilated and of the left contracted, mind wandering. Passed a bad night (no spasm or trismus after the operation); wine whey was given both by the mouth and rectum every hour during the night.

Aug. 4th, 8, A.M.—Mind again clear, pulse 94 but weak, has gained strength, wound suppurating.

5th.—Pulse 86 and good. Beef tea and wine whey still continued, with toast; wound suppurating freely.

6th.—Every symptom good—still quite weak.

10th.—Ordered the wound to be kept open five days.

Jan. 12th, 1870.—She is as well as ever; no spasm of any kind since the operation.

COLD-WATER TREATMENT OF TYPHOID FEVER IN MUNICH.

Translated from the Allg. Med. Central Ztg., by D. F. Lincoln, M.D.

In the course of the preceding year the treatment of typhus by cold water, after the method of Brand, has found its way into nearly all the large hospitals of Germany; and its eminent success has received such unanimous confirmation, that we may very properly direct especial attention to those cases which have resulted fatally in spite of the treatment.

In the late Prof. von Pfeufer's department of the General Hospital in Munich, 126 typhoid patients underwent the cold-water treatment from the time of its introduction (Oct. 1, 1868) to June 1, 1869. Of these, there died ten; or 7·9 per cent; while the previous mortality in the same department is reckoned at 12–15 per cent. And in an epidemic which broke out in the first part of June, and which is at present on the decline, only two have died out of more than one hundred patients treated in the department.

Half-baths, of from 10° to 16° R (55–68° F.), and lasting from a quarter to half an hour, were almost exclusively used. As soon as the temperature under the arm-pit reached 39·5° C. (103·1° F.) the patient was seated in the bath and the water in the bath was thrown and poured over him; if the temperature had risen to 40° C. (104° F.) or higher, ice-water was poured over him while he remained in the bath. In the intervals of bathing he was covered with compresses wet in cold water, changed whenever required; these have now been replaced by large bags of ice applied to head, breast and abdomen. Ziemssen's method of gradually cooling the baths could only be used in exceptional cases, owing to a deficiency in the number of attendants. When the bath was contraindicated, frequent washings with ice-water, lasting ten or twenty minutes, were substituted. Of late the patients in this department have been covered with a simple linen cloth instead of a woollen one, and the author believes that this change has been a perceptible assistance to the cold-water treatment. Different medicines were given only exceptionally, when urgently required.

The following are the general conclusions in reference to the ten fatal cases.

1. In seven, the autopsy revealed the existence of ileo-colo-typhus; of these, three were cases of relapse. Three died in the fifth week, four in the fourth, two in the third and one in the second. Important alterations in the lungs were observed in all but one case; viz., croupous pneumonia three times; splenization three times; larger or smaller infarctions three times; malignant diseases of the larynx three times. Intestinal hæmorrhage was observed three times, but was only once of consequence.

2. As to the causes of death in the individual cases, they appear to be as follows: Three died of functional disturbance of the respiratory apparatus, caused by croupous pneumonia. Six died from the deleterious effects of febrile elevation of temperature, some directly from the heart, others indirectly through alterations in the lungs. In two of these six cases, the baths were not thoroughly administered; in one, the treatment was commenced too late; in three, the individual power of resistance to elevation of temperature was insufficient—one patient having tuberculosis, another chronic alcoholism, a third hypertrophy of the heart. One case died from hyperæmia in all the vital organs, especially the lungs, in consequence of forcing the cold baths too far; the heart in this instance, especially the left ventricle, was hypertrophied, and the pericardium was adherent to the entire surface of the right ventricle.*

The most important conclusions drawn from these ten cases are as follows:—

1. In order to determine the causes of death in the several cases, it is absolutely necessary to make a careful comparison of the clinical records with the results of autopsies; and above all, to make the most diligent microscopical examination of all vital organs.

2. The cold-water treatment fails to arrest the fatal result—

(*a*) in cases where death is caused by local lesions in the intestine (perforation, melæna);

(*b*) when death is caused by the intercurrence of local affections, as croupous pneumonia;

(*c*) in cases which come too late under treatment—as when there are prominent symptoms of fatty degeneration, especially of the muscles of the heart;

(*d*) when the temperature is permanently high, but the bath is contra-indicated by existing conditions (heart disease) or by subsequent circumstances (intestinal hæmorrhage);

(*e*) when the individual has but feeble power to resist the action of high febrile temperature (in tuberculosis or alcoholism), and while the efforts made to reduce that temperature are but imperfectly successful.

3. Pneumonia does not contra-indicate the use of cold baths. Heart diseases require that they shall at least be administered in their mildest form (Ziemssen's baths).

4. A definite temperature (39·5°=103·1° F.) cannot by itself be regarded as establishing the necessity of the bath. Another factor is equally important, namely, the duration; for if the temperature ranges from 39° to 39·5° during several hours, the bath is required at least as much as if the latter degree were observed but once, while

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* In spite of the most violent opposition from the patient, he was made to take twenty-four cold baths within five days. This did not effect any permanent reduction of temperature. His reaction, both in the bath and afterwards, was excessive; his complaints of extreme constriction, difficulty in breathing, and suffocation, did not diminish upon growing accustomed to the baths, as is so often the case with other patients; cyanosis, and long violent chills, were repeatedly observed after the bath. On the 22d of December he took seven baths, after the last of which he fell into a state of collapse, which required the use of stimulants, and induced the physician to suspend the application of cold in this energetic form. The temperature, however, had not been reduced by this bath. On the next day the patient had somewhat recovered, but his general condition was considerably below what it had been.

the general range of temperature were low. Experience has shown us, at least, that a fever with distinct remissions and exacerbations, though the latter may be very considerable, is much better borne than a temperature which is moderately but continuously high.

6. Account must be taken, as far as possible, of the individual power of resistance. The thermometer may not always furnish the first indication for the bath; for the individual weakness may be first denoted by a failure of the pulse, or the occurrence of delirium, or of albuminuria.

7. The cold-water treatment is susceptible of still further improvement.

Bibliographical Notices.

On the Physical Basis of Life. By T. H. Huxley, LL.D., F.R.S. New Haven: Charles C. Chatfield 1870.

This lecture, originally delivered in Edinburgh, Nov. 18, 1868, sets forth in a popular form that theory of life which it is difficult, notwithstanding the author's disavowal, to avoid calling materialistic.

Dr. Huxley begins by illustrating the various forms in which the "physical basis of life," or "protoplasm," is found, from the lowest fungus to the great trees of California, or the invisible animalculæ to the whale, and shows that the essential characteristics of all living things are similar in kind though differing in degree. These views, with their further illustrations and various facts of inorganic and organic chemistry, are not, however, what make this lecture so remarkable and have caused it to be so widely circulated in England and in this country. The following sentences will, better than any others which can be quoted within reasonable limits, express the views of the lecturer.

"If the properties of water may be properly said to result from the nature and disposition of its component molecules, I can find no intelligible ground for refusing to say that the properties of protoplasm result from the nature and disposition of its molecules."

"It may seem a small thing to admit that the dull vital actions of a fungus, or a foraminifer, are the properties of their protoplasm, and are the results of the nature of the matter of which they are composed."

"But if, as I have endeavored to prove to you, their protoplasm is essentially identical with, and most readily converted into, that of any animal, I can discover no logical halting place between the admission that such is the case and the further concession that all vital action may, with equal propriety, be said to be the result of the molecular forces of the protoplasm which displays it. And if so, it must be true, in the same sense and to the same extent, that the thoughts to which I am now giving utterance, and your thoughts regarding them, are the expression of molecular changes in that matter of life which is the source of our other vital phenomena."

The "gross and brutal materialism" of which Dr. Huxley expects to be accused, he repudiates, but not so much by explaining away or modifying the views just expressed, as by saying what may be condensed into "I do not know anything more." His concluding sentence really expresses the true scope of his argument, and the doctrines which it might seem to support are opposed by two admissions: 1st, that protoplasm only becomes such under the influence of preëxisting protoplasm (p. 25); and 2d, "that our volition counts for something as a condition of the course of events" (p. 34).

The sentence referred to is as follows:—

"Thus there can be little doubt that the further science advances, the more extensively and consistently will all the phenomena of nature be represented by materialistic formulæ and symbols. But the man of science, who, forgetting the limits of philosophical inquiry, slides from these formulæ and symbols into what is commonly understood by materialism, seems to me to place himself on a level with the mathematician, who should mistake the x's and y's with which he works out his problems, for real entities; and with this further disadvantage as compared with the mathematician, that the blunders of the latter are of no practical consequence, while the errors of systematic materialism may paralyze the energies and destroy the beauty of a life."

This lecture, though highly interesting as showing the position of so eminent a thinker as Prof. Huxley, and many others with him, really testifies to no important advance in knowledge, but only gives the key to a new method; for, admitting as fully as we please, that all the higher as well as lower vital actions are coincident with changes of certain masses of protoplasm, the question of cause is not in the least touched thereby. If Prof. Huxley declines to consider the questions usually called metaphysical, he has undoubtedly a right to choose as his field of labor that in which he has labored with so great success; but it is by no means so certain that other paths lead to such insignificant results as he would have us suppose.

The publishers should be thanked for presenting this highly instructive address in so convenient a form. E.

A Practical Treatise on the Diseases of Children. By Alfred Vogel, M.D., Professor of Clinical Medicine in the University of Dorpat, Russia. Translated and edited by H. Raphael, M.D., late House-surgeon to Bellevue Hospital, &c. &c. From the Fourth German Edition. Illustrated by six Lithographic Plates. New York: D. Appleton & Co. 1870. 8vo. Pp. 593.

Paper excellent. Type rather small, but very clear. Illustrations extremely well done.

The classification seems to be pretty much that which forms the basis of the new Nomenclature of Diseases issued by the Royal College of Physicians of London.

Thus we have "diseases of the apparatus of digestion; diseases of the organs of circulation; diseases of the organs of respiration;" &c. And the work is by *Vogel! Verbum sat sapientibus.*

What to do and what to avoid in examining children, is what neither lectures, nor clinical instruction—at home or abroad—has usually taught. These things have been learned by slow and vexatious experience; though now that the Dispensary has been reorganized and the Children's Hospital established, there is reason to expect a great improvement in the matter. However this may be, Vogel gives "Rules for the Examination of Children." We extract portions of the chapter on that subject.

"There are three circumstances which act as obstacles to the child's physician: the absence of speech, the marked agitation which the examination always induces, and, lastly, the crying which often accompanies this agitation. The first obstacle, of course, cannot be removed; it may, however, in a measure be replaced by a well-directed, comprehensive interrogation of those in charge of the child; the last two, on the contrary, must be avoided."

"*Eusèbe de Salle* very correctly observes that the healthy nursling has a totally expressionless physiognomy, in which every one, a mother perhaps excepted, must agree with him. The fact is all the more important, that sick children have a certain expression of countenance, in great part due to the disappearance of the adipose tissue from the subcutaneous tissues; in part, however, this is due to a peculiar contraction of the otherwise relaxed facial muscles."

"Alas! it will not be made so easy for the physician to recognize and diagnosticate a disease by merely inspecting the face. But there is one single sign characteristic of a certain disease found in the face, namely, the rising of the alæ nasi with every inspiration, by which we are able to diagnosticate, with the greatest certainty, an inflammatory affection of the lungs."

"Healthy children, when tired, fall asleep in any posture and quietly continue to do so; but in pneumonia, in most instances, they choose the dorsal decubitus, or lie on the affected side, and will immediately turn over if they happen to be placed upon the unaffected side. Children with scrofulous inflammations of the eyelids, and sometimes those with cephalic pains, lie upon the face.

"When infants during nursing, or shortly after that, are laid upon the left side, they generally become restless and begin to vomit; this is apparently owing to the enormous size and weight of the liver, which in this position presses upon the stomach. For that reason also do nurslings suck with more ease at the left breast, for, being oftener put to this one, more milk is usually found in it than in the right. This argument is quite probable, from the fact that nurslings who obstinately refuse to suck at the right breast will very often take it without any objection as soon as their lower extremities have been put upon the mother's right arm and they are allowed to *nurse while lying upon the right side.* Children frequently point directly to the site of the pain with the hands."

"The flexing and extending of the lower extremities by starts and jerks, attended by crying, are the ordinary signs of flatulence, and cease as soon as the flatus has been discharged.

"The examination of the pulse can only be carried out with success in a *sleeping* child. In one that has waked up suddenly, or has become agitated through much handling, the physician will find that he has to battle with insurmountable difficulties. The child seeks in every manner to twist itself loose from his grasp, and the firmer the arm is fixed, the tenser does the child make its muscles, and it often becomes wholly impossible to feel the pulse.

"Various measures have been suggested by which we might be enabled to feel the pulse in a child, such as to allow it to suck at the breast or bottle. But the act of sucking always accelerates the respiratory and the cardiac actions, and for this reason no useful information whatever can be obtained by this method. It is best, therefore, to quietly approach the child while asleep, lightly compress the radial artery with the end of the index-finger, and, when it moves its arm, accompany it in all its movements without the least resistance; after the removal of the fingers the child usually sinks again into a sound and lasting sleep. But if the restlessness of the arm continues, the examining finger should be withdrawn, because otherwise the child will surely be awakened, and no time is so unfavorable for examination by the physician as that after awaking from sleep. The neglect of these precautionary measures will doubtless serve to explain the reason why most authors state the pulse of the nursling infant to be so high, 130 to 140 beats per minute. Valleix, physician to the Foundling House at Paris, has found the medium of the pulse in thirteen healthy sleeping nurslings, from three to twenty-one days old, to be 87 (minimum 76, maximum 104). In twenty-four healthy sleeping nurslings, I found the minimum 92, maximum 136, medium 109 per minute. It is still more difficult, on account of the smallness of the artery, to discriminate between a hard and a soft pulse. Undoubtedly, our chief attention in nurslings should be directed to the rhythm of the pulse; an unrhythmical, interrupted pulse occurs in cardiac affections and cerebral diseases. Great frequency of the pulse-beats in children has much less significance than in adults, for that condition is induced by the least excitement and the most trivial pain. Slowness of the pulse is observed in sclerema of the new-born, and in cerebral compression. In many instances before death the pulse is altogether imperceptible for one or several days."

"*Inspection.*—First of all, as regards the number and kind of respirations in children who have not yet passed the first year of life, it appears, from the very positive statements of the most conscientious authors, that upon this point no definite normal numbers can be given. These statements fluctuate between eighteen and thirty-five respirations per minute. Above all, we must remember that the respirations, even of healthy children, are not alike during sleep and wakefulness. Only during sleep is respiration performed in a perfectly regular and rhythmical manner."

"*Percussion* of the infantile thorax is best executed without a pleximeter or hammer, finger upon finger. * * * Children carried about upright are best percussed in the arms of the mother. * * * Young infants should be percussed in the lateral decubitus, from which little opposition will seldom be encountered."

"The percussion-stroke should be made absolutely softly, gently, and slowly, and should be continued long enough on one spot until there has been a chance to percuss in the moment of the deepest inspiration and most complete expiration; for this purpose, ten and even more blows will often be requisite."

"I must call special attention to a phenomenon which, in spite of its daily occurrence, has nowhere yet been properly estimated, and still less satisfactorily explained, namely:—when both lungs of a healthy child are percussed by way of comparison on the back, from birth up to the second and even the third year, there is found on both sides, so long as the child breathes calmly, and makes no noise whatever, a sonorous, feeble, or strong tympanitic percussion-sound; as soon, however, as it becomes disturbed or restless, or when it resists the examination, and proclaims its unwillingness by a pressing outcry, then *the whole condition is suddenly changed.* Instead of the equal sonorous tympanitic sounds of both sides, a moderately dull percussion-sound prevails over the left lung, and a flat, empty sound over the right lung as far upward as the spinæ scapulæ. But, if the percussion is now quietly continued on the same spot some seconds, or even for minutes, till it happens that a percussion-stroke coincides with the moment in which the child again inspires deeply, and, for that purpose, has to abandon the abdominal pressure till the completion of the respiratory act, the original normal percussion-sound is suddenly heard again; it, however, lasts but a few moments, and is instantly succeeded by an empty, flat sound."

"The proximate reason for this diminished sonorous sound upon the entire dorsal service is owing to the abdominal pressure, whereby the whole contents of the abdomen are compressed upward. The difference between the right and left sounds, namely, the completely empty, flat percussion-sound on the right, is explainable by the strong upward pressure of the liver, the size of which is still disproportionately greater in comparison with the rest of the abdominal organs."

"The singular phenomenon just described, namely, the complete dulness posteriorly toward the right side, causes my confidence to be somewhat shaken in the histories of pneumonia in small children that we find so frequently in text-books and journals; and the more so, as the dulness in those cases is always described to have been most intense posteriorly on the right side. Such physical investigations can only be relied upon in which it is expressly stated that, during the investigation, the child respired perfectly calmly and quietly; that it did not employ the abdominal pressure, and that the dulness detected then was also present during the inspiration, and could be distinctly discerned for several days. I am convinced that attacks of bronchitis, which in the first days of their existence are attended by some fever and dyspnœa, are regarded as cases of pneumonia in consequence of the observer's not being aware that the dulness which, under the circumstances described above, appeared on the right side posteriorly, *is a normal physiological condition*; this may also explain the successful treatment of and rapid recoveries from pneumonia."

"*Auscultation.*—In emaciated children, when the intercostal spaces present marked depressions, it is altogether impossible to adapt the stethoscope accurately, and hardly any child tolerates the auscultation of the anterior or lateral surfaces of its thorax with the naked ear, therefore it only remains for us to auscultate the back. But while in the adult we definitely know the space that is bounded by tracheal respiration, in children this is not the case. In healthy children we hear over the entire back, often even over the entire thorax, *a loud expiration and a tubular inspiration*, so that, although this condition, when met with in an adult, would make us unhesitatingly affirm an extensive consolidation of the pulmonary tissues, yet it would not in children. * * * Auscultation of the voice furnishes good cardinal points. The voice, it is true, consonates all over the infantile thorax, but where solidified pulmonary tissue exists, there it consonates so forcibly that the examiner believes he holds his ear against the mouth of the child, and that it cries directly into it. This sign is all the more valuable, as it is available in crying children, and therefore does not necessitate any particular care or loss of time in examining the child.

"*Palpation* is the simplest and most convenient method of examining the infantile thorax. When the hand is laid upon the chest of a child, the temperature and moistness of the skin are immediately appreciated." * * * *

"Besides the above general advantages, the hand that is laid upon the chest also feels the fremitus of the voice, *i. e.*, the vibrations of the thorax communicated to the hand, which originate with the voice, and disappear again as soon as it ceases. These vibrations are most strongly felt at the spot where they originate, over the trachea and larynx, very distinctly along the spinal column, in the space between the scapulæ, plainly in the lateral regions, and over and above the clavicles and the sternum. Where the heart and liver are in direct contact with the chest, the fremitus is completely arrested. Layers of adipose tissue also weaken the vibrations.

"Now, these phenomena occur in every healthy child, but become modified as soon as a part of the pulmonary tissue undergoes solidification by compact tubercles or scirrhous infiltration, lobar hepatization or carnification. When, in the above affections, the larger bronchi, terminating in the solidified parts, remain permeable, *the voice is felt much stronger than in health.* Occlusion of a bronchus abolishes all fremitus over a corresponding portion of the lung. Fluid effusions into the pleural sacs, where the liquid keeps the lung from the ribs, also hinder us from *feeling* the voice. On the other hand, in the compression of the lungs that necessarily results from that condition, the fremitus is much augmented over those parts of the thoracic walls against which the compressed lungs lie.

"In addition to the voice, the rhonchi may also be elicited by palpation. If the tenacious masses of mucus which fill the trachea and bronchi in the form of lamellæ or trabeculæ are set in motion by the respiration, a certain sound is produced, which is carried along the thoracic walls farther and more distinctly than any other. On this latter circumstance is based the erroneous supposition that these sounds originate where they are most distinctly felt. The higher up toward the trachea the vibrating mucus is situated, the more diffused are the sounds produced thereby felt over the thorax; the smaller the calibre of the bronchus containing the mucus, consequently the nearer the periphery of the lung, the more circumscribed will the sound be on the thoracic walls.

"*Palpation* of the voice and rhonchi should never be omitted, and in restless children must even take the place of percussion and auscultation.

"These are the main points to which the physician has first to direct his attention in the sleeping or at least in the quiet child. Percussion should always be the last thing to perform, because by it the child is apt to be waked from its sleep."

"*Valleix*, when he desires to examine the abdomen of a child, causes it to be brought suddenly to a bright window or near a light, on which the restlessness, as a rule, instantly ceases; the child is attracted by the light, and gazes at it steadily for some time. This moment must be made use of to make a slow, increasing pressure upon the abdomen, to which the child will calmly submit so long as the pressure causes no actual pain. In this manner the abdomen of the youngest child may frequently be pressed so firmly as to touch the spinal column. If the pressure is really painful, the child will utter an agonizing cry and distort its features, which sometimes directly ceases again as soon as the pressure has been removed."

"The examination of the mouth should never be omitted. By pressing slightly upon the chin the child will usually open the mouth, or a finger may be introduced and carried slowly backward between the cheek and gums, till it reaches the anterior border of the ascending ramus of the lower jaw; here the finger is insinuated between the upper and lower maxillæ, and now the mouth may be opened to the required extent. By a little adroitness and practice it is very easy to examine with the index-finger the posterior pharyngeal wall, the posterior nares, the epiglottis, and even the glottis itself; such an examination will often give much important information in certain cases of diphtheritis, retropharyngeal abscesses, croup, &c.

"The tongue, in children, is even less 'the mirror of the stomach' than in adults. Children with severe intestinal diseases very frequently have a perfectly normal red tongue, and conversely healthy children with a good appetite and regular digestion often exhibit a very white, or, at least, a tongue spotted with islands of white fur."

"Teething children with swollen gums allow their mouths to be examined very unwillingly; it is therefore necessary to become accustomed to examine both jaws as rapidly as possible by one sweep of the finger, so that they may not thereby be irritated and disquieted."

"The most important conclusions, as to the nature of the disease, to be drawn from the cry, are the following:—children who suffer from pneumonia, pleuritis, or atelectasis of the lungs, *never cry loud, or continuously*; they can only emit a low, painful moan. Children afflicted with catarrhal, diphtheritic or croupous laryngitis, are unable to cry at all, they are aphonic; the milder degrees of catarrhal inflammation of the larynx do not completely suppress the cry, but make it hoarse. Hydrocephalic children utter only shrill tones, and after each outcry relapse into their former drowsiness. A child ill with fever never cries continuously nor long, even when it suffers violent pains. Children suffering from otitis, deep abscesses, or when wounded, cry the longest and most violently.

"In the *cough* we have a very important index by which to judge of the state of the respiratory organs. If the child coughs loosely, loud, and without pain, it is very certain that we have only a simple bronchial catarrh to deal with; if, however, it distorts the countenance when provoked to cough, if the cough is dry and low, and if it seeks to suppress it as much as possible, then it is equally as certain that we have to deal with an inflammatory affection of the lungs. Croup begins with a dry, barking cough, which but too soon gives place to a low aphonic sound."

"Now, as regards the conduct of the physician, the utmost patience and gentleness are indispensable in his intercourse with children. Those from one to three years old are always the most difficult to manage. Nurslings and children under one year are seldom very timid, and are easily quieted by some diverting noise. But older children often have an insurmountable shyness for every strange face. Such a child the physician must not approach immediately after entering the room; he should at first ignore the child's presence altogether; should enter into a conversation with the parents or nurse, in a gentle voice, and finally gradually approach the child with some bright object, or with a piece of sugar. When at the bedside, the child should not be immediately uncovered, its abdomen felt and squeezed, and the physical examination instituted. Some questions suitable to its age are first put to it, its playthings are admired, or it is told of some new ones, and promised to be presented with them, &c. &c.; in short, it is necessary to be on friendly terms with the child before the undertaking of a regular, thorough examination can be thought of. In this manner, however, it is almost always possible to quickly gain the friendship of the child. If, with a friendship formed in this manner, a little seriousness and energy are allowed to be blended, much more authority will thereby be acquired in a moment over the child than the parents ever thought possible. Children, under such authority, allow themselves very quietly to be examined, readily lie down upon any side desired, take even the bitterest medicines without objection, and assist the medical examination in every manner possible. *Never, and under no circumstances, should the attempt be made* to bring an unruly child into obedience by harshness, by firmly holding it, and still less even by a slight blow. Such measures not only cause greater fear, and give rise to violent crying, but the physician will thereby only bring upon himself the aversion and even hatred of most narrow-minded parents—the class that usually have boorish and unmanageable children. On the other hand, if the physician in such instances retains his equanimity and mild voice, the parents will feel most disgraced by the ill-breeding of their children. They then sometimes punish the child so severely that the physician, from a medical point of view, has to interfere, and then he will have gained an humble and submissive patient. In general, the principle will hold good that the more seriously sick the child is, all the more easily will it permit itself to be examined.

"To the commencing practitioner, inexperienced in the Pædiatria, these observations may appear insignificant and unimportant, but, when he has once conducted himself in accordance with them, he will perceive that without these details a successful treatment would be clearly impossible, notwithstanding all his knowledge and skill in the methods of examination."

From the succeeding chapter on "Nursing and Care of Children," we quote briefly.

"The essential difference between woman's milk and cow's milk does not consist in the differences of the quantities of the milk-sugar and of the butter, but in this:—that the casein of cow's milk, when it turns sour, curdles into large lumps, and even into a solid gelatinous mass; whereas the casein of woman's milk always coagulates into small lumps and loose flakes."

"The loose flakes of the woman's milk are easily digested and assimilated; the firm lumps of casein of the cow's milk, the infantile gastric juice is incapable of dissolving, they are thrown up again or wander through the whole intestinal canal as large, sour, undigested masses, irritating it in its entire length. Hence it all depends upon our ability of depriving the casein of cow's milk of this property, and that in a great measure may be accomplished by rendering it slightly more alkaline. For this purpose I have been in the habit of using for some time back a solution of carbonate of soda (ʒj. to water ℥vj.), a teaspoonful of which is added to the milk at every meal. When the milk is boiled into a mess or porridge, I cause the solution to be added to the cold milk, and in summer the entire quantity of milk to be consumed in the twenty-four hours should be rendered alkaline immediately upon its arrival at the house, by adding a tablespoonful of the solution to every five ounces of milk. For very young children I cause, in addition, one-third of water and as much milk-sugar as can be taken upon the point of a knife to be added at every meal; children over three months old drink cow's milk as it is, but always with the addition of the carbonate. I have seen dozens of children brought up upon milk thus prepared, and the majority have experienced no digestive derangements whatever. If the parents are sensible, they will abstain from giving the child *all* other kinds of food but this milk for the first three months, and at the beginning of the fourth month *one* other mess a day only may be allowed."

"By far the most rational of all substitutes for the mother's milk is undoubtedly the so-called *Liebig's* soup, by which the great chemist has rendered an everlasting service to the Pædiatria. As is well known, we find:—

	Blood-forming material.	Caloric-generating material.
In woman's milk . .	1	3·8
" cow's milk, fresh . .	1	3·0
" cow's milk, skimmed	1	2·5
" wheat-flour . . .	1	5·0

"A mixture of wheat-flour and cow's milk may therefore be easily produced that will present the same proportions of blood-forming and caloric-generating component parts as human milk; wheat-flour, however, reacts acid, and contains much less alkali than woman's milk, less than is requisite for the formation of normal blood, and, finally, a totally unnecessary labor, the conversion of the starch-flour into sugar, is imposed upon the infantile organism. It is, therefore, desirable first of all to convert the starch-flour to the soluble form of sugar and dextrine; this is easily accomplished by the addition of *malt-meal* to the wheat-flour. When milk and wheat-flour are boiled into a thick soup, and malt-meal is added to this still hot soup, the mixture in *a few minutes becomes liquid and acquires a sweet taste*; upon this and upon an addition of an alkali in order to neutralize the acid reaction of the wheat-flour, is based the formation of *Liebig's* soup."

This soup Vogel recommends to be used in large cities, where it is difficult to procure *unadulterated cow's milk.*

Measles, Vogel classes with Diseases of the Skin, while the new nomenclature places it among "General Diseases." But both systems give it the name *morbilli.* Vogel, however, does what the new nomenclature does not—he finds a separate disorder to which the name *rubeola* has been given. He thus speaks of it.

"RUBEOLÆ (*Rotheln*).—There is scarcely another disease upon which the views of authors differ so vastly as upon rubeola. Some look upon it as a modified scarlatina, others as measles, and still others as an amalgamation of both. Erythema, urticaria, even typhous and cholera exanthema, have been described as rubeola; and the confusion finally became so inextricable that later writers have denied the existence of the disease entirely, and ascribed all obscure and doubtful cases to some of the above-mentioned affections. This latter view I also entertained till the spring of 1865, when I became better informed. At that time eleven persons—three adults and eight children, from six months to eight years of age—came under my care. Without any distinct prodromata presented, they all had an eruption of exanthema, which differed in no respect from that of measles. My friend *Lindwurm* at the same time had five additional cases to treat, and, upon inquiries, several physicians in Munich recollected having seen at that time a peculiar fever, 'a febrile urticaria with a measles-like exanthema.' Neither before nor since that time have I met with this eruption. It is proper to remark that this disease was not immediately preceded nor soon followed by any epidemics of measles or scarlet fever. The phenomena presented by this affection are sketched by *Köstlin,* of Stuttgart, in the following manner :—In the winter of 1860–'61 an extensive epidemic of rubeola prevailed in that city during five or six months. The exanthema was not smooth, but slightly papulous, had a yellowish tint, not confluent, but formed short or long, serpentine, seldom straight lines, which, in most instances, covered the entire body. The exanthema was not infrequently accompanied by considerable itching of the skin. The eruption, as a rule, disappeared in two or three days, or even sooner. In most instances it appeared, and ran its course without the least catarrhal symptoms, and without fever. Though mild, this exanthema was extremely infectious, infecting whole families. Several children were even twice attacked during the same epidemic. It appeared at the same time in various other cities and towns in Wurtemburg.

"*Symptoms.*—The symptoms which I have observed may be comprised in a few words. The exanthema differs in no respect from that of morbilli; small round spots of the size of lentils cover the entire body, occasioning, in most instances, a considerable amount of itching. At some places these spots stand so closely together that they coalesce and form irregular figures. They also rise somewhat above the level of the normal integument, and the finger, in lightly passing over them, perceives an unequal hardness. The eruption differs, however, very much from measles in respect to its duration. It completely disappears by the end of the first, or, at the longest, by the end of the second day, and the desquamation that succeeds it is very insignificant, barely noticeable. The same is true of the catarrhal symptoms. Although, along with an intense eruption of the exanthema on the face, the eyelids swell up, and the conjunctivæ are somewhat injected, still bronchial catarrh is uniformly absent, which, in morbilli, on the contrary, is a pathognomonic, never-failing symptom. Scarcely any precursory stage was noticeable in most of our cases, and the indistinct febrile phenomena disappeared so completely after the first day, with the fading of the exanthema which soon followed, that by the third day it was totally impossible to keep the children in bed, and they quickly recovered without the first sequelæ.

"*Treatment.*—This is purely expectant. Internally, dilute acids, and externally, cold ablutions, to relieve the intolerable itching of the skin, were the only remedial means employed in this most harmless of all acute febrile exanthemata."

PROF. WOOD, in his monograph on the hemp plant of North America, concludes it an excellent substitute for the foreign article, being both cheaply prepared and active. He uses the male seedling plants from Kentucky, and proved his faith in it by dangerous experiments upon himself. The active principle is a soft greenish resin, and is sufficiently active in quarter and grain doses.—*Chicago Medical Journal.*

Medical and Surgical Journal.

Boston: Thursday, March 31, 1870.

NOTES FROM FOREIGN JOURNALS.

The Story of two Severed Arab Heads.—Such is the unique title of a unique monograph, on an experiment for which we coin the word *mortuo-vivisection*. The paper was sent us by the author, Dr. Bonnafont, and we proceed to translate a portion of it.

On the occasion of every execution which takes place in Paris, the newspapers are taken up with the question, happily without foundation, whether or not the head after being severed still retains the power of sensation. The reflections on this subject published in the *Figaro*, at the time Lemaire was guillotined, remind M. Bonnafont of the experiments made by him in relation to the subject, and which in his opinion are conclusive. Although, as he says, these experiments were communicated to the Academy of Sciences several years ago, and have been reproduced by the sprightly author of the *Causes Célèbres*, Frederic Thomas, they seem worth republication, especially since the appearance of M. Grousset's article.

We will now let M. Bonnafont speak in the first person.

It was, I think, in 1853 that a physician of New York, Dr. Wilson, expressed the opinion that a head severed from the body retained sensation for *two and even three minutes*. When present at a party in Algiers, a military *sous-intendant*, M. de. Fallois, took me aside and asked what I thought of this assertion of the American physician. I answered that the thing seemed to me impossible. But, in spite of all the physiological reasons I cited, nothing could shake his faith, which was also shared by a large number of the persons present. Being unable to convince him by reasoning, I proposed to my ingenious disputant a decisive method of cutting short all discussion, by attending and experimenting at an execution if he should have the courage. At that time nothing could be easier than the carrying out of this project; for the Arabs were committing crimes quite often, and justice, compelled to be severe, was furnishing to the executioner frequent opportunities of exercising his skill. M. de F. recoiled with astonishment at my proposal, and at first knew not what to reply. But, his self-esteem being aroused, he decided to accept the challenge. I learned the next day, through the judge-advocate, that two Arabs were to be beheaded a few days subsequently. He proposed, if I wished to be present at the execution, to obtain permission for me to attend.

The day having arrived, I took the measures requisite to render the experiment as conclusive as possible. I had beforehand caused to be carried to the place where the execution was to occur, a small and very low table, such as used by the Arabs. On this was placed a shallow wooden vessel, which was commonly employed for mixing a certain paste, and which I had filled with powdered plaster of Paris. It is needless to say that the experiments were to be made unexpectedly to every one present but my companion and myself. About a quarter of an hour before the arrival of the two prisoners, we betook ourselves to the place of execution, provided with a small speaking trumpet and a very keen stiletto. It had been arranged with the executioner that as soon as the head was cut off one of his assistants should set it on the powdered plaster, in order to arrest the hæmorrhage as much as possible. The first head being cut off, M. de F. was to call it by name, with the speaking trumpet applied to the ear, while I should observe whatever might take place in the eyes and the other parts of the face. Well! it turned out that notwithstanding the cries uttered in the ear I noticed not the slightest sign of life. The eyes remained dull and motionless, the face colorless. The muscles contracted scarcely at all under the punctures made with the stiletto.

We changed places for the second head. M. de F., who had been a little pale and flustered at the first experiment, had recovered his self-control at the second, and was able to ascertain for himself that death had been complete and instantaneous. It could not be otherwise, physiologically speaking. For, immediately upon section of the large arteries which carry the blood to the encephalon, there is a sudden sanguineous depletion, which must necessarily bring with it syncope, followed instantly by death. * * * * *

M. Bonnafont complains that these two historical heads were sent (by a person who had borrowed them from him) to M. de Blainville, of the Museum of Natural History at Paris.

MM. Evrard and Beaumetz report a course of experiments, much more complete and exhaustive than the above, on the head of a guillotined criminal. The negative results were of course similar to those of M. Bonnafont. The muscular contraction produced by electricity was shown (clearly enough to undeceive, we should suppose, the most credulous) to have no connection with sensation or consciousness, by the fact that the muscles of the face continued to contract *a half an hour after the extraction of the brain.*

Spontaneous Combustion, so called.—Dr. Alexander Ogston, of Aberdeen, contributes an article on this subject to the *British and Foreign Medico-Chirurgical Review.* Dr. Ogston has collected the accounts of a considerable number of alleged instances of this phenomenon; some of which he sets down as fables, and others as truthful descriptions of the facts observed. The interpretation of those facts, however, he considers not to bear out the theory of *spontaneous* combustion. He infers *increased combustibility.* That same increased combustibility, he admits, is often traceable to excessive indulgence in alcoholic potations. But, at this point the path of investigation divides into two diverging lines. Is the combustibility increased by the impregnation of the living tissues with alcohol; or does the matter reduce itself to a mere increase of a natural compound of the body which is easily ignited—viz., the fatty tissue? Dr. Ogston favors the latter theory. He remarks that the subjects of what is called spontaneous combustion have been generally, though not invariably, fat persons. On the other hand, he in a note cites experiments on flesh removed from the body, from which it appears that soaking in alcohol neither accelerates or retards combustion. He also quotes the suggestion of another, that the frequency of the occurrences on which the theory of spontaneous combustion from the presence of alcohol in the system is founded, is owing to the fact that the presence of intoxication materially increases the liability to the accident, and deprives the victim of the power of assisting himself or giving an alarm. The ignition is considered to be accidental—never spontaneous.

Dr. Ogston, however, does not deny that free alcohol may be found in the body; but, on the contrary, says that he has himself seen cases of death in people under the influence of alcohol, when the smell of it was strong in the blood, and was sometimes so marked in the ventricles of the brain "that it was possible to ascertain the nature of the beverage used."

BROKEN RIBS IN THE INSANE.

The *Boston Daily Advertiser*, in a brief notice of our extracts from the London *Medical Times and Gazette* relative to "broken ribs in the insane," says:—"Dr. Sankey's theory appears to be that the injuries were produced in the struggles between patients and attendants, but that the frantic conduct of the maniacs makes them almost unavoidable." We should like to have the *Advertiser* add another part of the argument, viz., that many at least of these injuries have been produced before entrance into hospital; and that the unskilled friends and even relatives of the insane are really more likely to do harm than the trained attendants of the hospital. This may be illustrated by a familiar fact. A policeman will sometimes be accused by the bystanders of too roughly handling an ugly customer, one who is perhaps frenzied from intoxication—crazy drunk; and yet if the prisoner were entrusted to any one of those lookers-on, the latter would quite likely outdo the officer, by losing his temper, and knocking his charge on the head.

The *Advertiser* speaks of "the surprising number of these cases which have lately come to light." So far as Mr. Charles Reade's collection of them is concerned, we are credibly informed that a portion of the list which he has lately published was got together years ago, before the publication of the novel we alluded to in our former remarks; and that some if not a large portion of his accounts were obtained from the *discharged attendants* of insane asylums, while he was "cramming" for that work of fiction.

If we were to heed all that we hear from disaffected persons who have been dismissed from the service of public asylums of any kind, we should perhaps be led to suspect that no one of these institutions was as near perfection as it should be. Of course no institution is free from occasional mistakes in the selection of the persons it employs. And, in these *exceptional* instances, the individuals who may have been turned away in disgrace are not likely to speak favorably of the *general* management which has weeded them out.

An article in the *Practitioner*, "On the Uselessness of Drugs in the Treatment of Organic Growths," by Alfred Meadows, M.D., has the following passages, which we have transcribed from a private copy of that journal:—

"While declaring thus plainly my utter unbelief in the supposed power of drugs to remove organic growths from the uterus or ovaries, I do not forget the testimony of many very competent observers to the fact that uterine fibroids do occasionally disappear. I can only say that I have never had the good fortune to witness such a thing, and I am well aware of the extreme difficulty which surrounds the diagnosis of these cases. It may be that this difficulty has much to do with the supposed disappearance of some at least of the tumors in question. But, even admitting that the diagnosis was perfect, and that the result as stated did actually occur, we are still without any evidence to guide us as to the mode by which such a result was obtained, and certainly we have no right to assume that the remedies given exercised the smallest influence. Such an assumption appears to me the more remarkable when I notice what those remedies are—viz., preparations either of iodine, bromine or chlorine, in combination with iron, potassium, mercury or calcium. Still more remarkable is it to observe that the external application of some of these agents to the skin of the abdomen is regarded as an essential and important part of the treatment! What right, I ask, have we orthodox practitioners, as we self-complacently call ourselves, to ridicule the follies of homœopathy while we countenance and gravely recommend such an absurd practice? Of very small use is all our advance in physiological and pathological knowledge if it does not teach us how foolish it is to expect that the rubbing in of iodine to the skin of the belly can remove one single fibre, one solitary cell, or one drop of fluid from a uterine or ovarian tumor. If we consider the subject in its anatomical or physiological relations, to say nothing of pathology, there is no explanation which can be offered, either in reason or in fact, why such a practice should ever have been introduced; and lamentable as much of our treatment of disease is, I would match this one sample against any which can be brought for ignorance and folly. * * * * *

"Turning now to the medicinal or internal treatment of these organic growths—uterine or ovarian—we have I fear no better reason to be satisfied with the current practice of giving preparations of iodine, bromine and chlorine, with mercury, potassium, calcium, &c. There is, in fact, no more trustworthy evidence in favor of these remedies when given internally than when they are applied externally. If in any case they had the virtue which is imputed to them, we have a right to expect that that would be exercised not occasionally and with *extreme* rarity, but very frequently, or at least in a fair proportion of cases; for it is unreasonable and contrary to all experience to suppose that a remedy which must act in a definite and intelligible manner, if it is to accomplish the reduction or removal of an organic growth, should exercise its properties only once in hundreds or thousands of cases. The very exceptional and extremely rare instances of its reputed action, even according to the admissions of its advocates, is *pro tanto* presumptive evidence against the existence of such a property and in favor of the view that the effect was, as it were, accidental—independent altogether of the imputed agent, and attributable to some entirely different cause.

Some time during the period of our first connection with this Journal, we entered a complaint that our cousins over the water had ignored the researches and discoveries of Dr. H. I. Bowditch, of this city, upon Soil Moisture as Coincident with the Prevalence of Phthisis, and had offered to the public their own investigations as primary. During a recent conversation with Dr. Munroe, we casually learned for the first time that there was a copy of the "Blue Book" in the possession of a gentleman here, and that it contained a full *amende honorable* on this point. We have obtained the great favor of the loan of that volume—entitled the Tenth Report of the Medical Officer of the Privy Council—and now present the following extracts from it:—

"*The water-holding power of a soil is determined first by its degree of perviousness;* and this, to begin with, is not the same throughout the whole extent of each bed, and still less can perviousness or imperviousness be taken as absolute terms to indicate that all pervious beds are exactly comparable together, or that one impervious bed is just as impervious as another. Secondly, the water-holding power of porous soils of equal permeability is determined in the main by different considerations than those which settle the water-holding powers of retentive soils of equal impermeability. In the former case, *elevation, slope of subjacent beds, and other conditions indicating facility for water running away have chief weight in determining its wetness or its dryness; in the latter case, of retentive soils, every consideration yields to the paramount one of surface slope.*" * * * * *

"The following general conclusions, then, result from the present inquiry:—

"(1.) Within the counties of Surrey, Kent and Sussex there is, broadly speaking, *less phthisis among populations living on pervious soils than among populations living on impervious soils.*

"(2.) Within the same counties, there is *less phthisis* among populations living on *high-lying pervious soils* than among populations living on *low-lying pervious soils.*

"(3.) Within the same counties, there is *less phthisis* among populations living on *sloping impervious soils* than among populations living on *flat impervious soils.*

"(4.) The connection between soil and phthisis has been established in this inquiry—

"(*a*) by the existence of general agreement in phthisis mortality between districts that have common geological and topographical features, of a nature to affect the water-holding quality of the soil;

"(*b*) by the existence of general disagreement between districts that are differently circumstanced in regard of such features; and

"(*c*) by the discovery of pretty regular concomitancy in the fluctuation of the two conditions, from much phthisis with much wetness of soil to little phthisis with little wetness of soil.

"But the connection between wet soil and phthisis came out last year in another way, which must here be recalled—

"(*d*) by the observation that phthisis had been greatly reduced in towns where the water of the soil had been artificially removed, and that it had not been reduced in other towns where the soil had not been dried.

"(5.) The whole of the foregoing conclusions combine into one—which may now be affirmed generally, and not only of particular districts—that *wetness of soil is a cause of phthisis to the population living upon it.*

"(6.) *No other circumstance can be detected,* after careful consideration of the materials accumulated during this year, *that coincides on any large scale* with the *greater or less prevalence of phthisis,* except the one *condition of soil.*

"(7.) In this year's inquiry, and in last year's also, single apparent exceptions to the general law have been detected. They are probably not altogether errors of fact or observation, but are indications of some other law in the background that we are not yet able to announce.

"*Postscript.*—The conclusions of this report had been drawn, and their agreement with observations of last year's report had been seen, when, at the end of 1867, my attention was directed by Dr. Gavin Milroy to the Seventh Annual Report of the Registrar-General for Scotland, in which (pp. xlvii.–xlviii.) he quotes 'the conclusions which Dr. Bowditch, of Boston, U. S., has drawn from a very thorough inquiry into one of the causes of consumption in Massachusetts.' The Registrar-General writes:—'It must be remembered that consumption is much more fatal in Massachusetts, and in the United States of America generally, than in this country; and on investigation it was found that the towns, villages, hamlets, and houses which were situated at or near undrained localities, or were on heavy impermeable soils, or on low lying ground, and whose sites were consequently kept damp, had a very much larger number and proportion of cases of consumption than towns, villages, hamlets, or houses which were situated on dry or rocky ground, or on light porous soils where the redundant moisture easily escaped. Let us see how such an explanation would agree with the very different proportion of deaths from consumption which occur in the eight principal towns of Scotland. Taking a five years' average (1857 to 1861 inclusive), it is found that, supposing all these towns are brought to an uniform population of 100,000 persons, there died annually from consumption 206 persons in Leith, 298 in Edinburgh, 310 in Perth, 332 in Aberdeen, 340 in Dundee, 383 in Paisley, 399 in Glasgow, and 400 in Greenock. The fact is, that if each town had been arranged in the order of comparative dryness of its site, they would almost have arranged themselves in the above position—Leith and Edinburgh the most free from consumption, and also having the driest sites; Glasgow and Greenock the most ravaged by that disease, and beyond all comparison situated on the dampest sites. The above fact, then, with regard to the towns, corroborates, in the most striking manner, the conclusions of Dr. Bowditch, and should be a valuable help to the sanitary reformer, as to the very important measures which it is their more especial province to carry out. Dr. Bowditch's conclusions also are singularly borne out by the remarkable freedom from consumption at the Cape of Good Hope and South Africa generally, Egypt, &c., and the comparatively high mortality from it in the moist climate of Great Britain; and while they point out the cause, afford valuable indications as to the cure or relief of those affected.'

"Until the end of my own inquiry, I was in complete ignorance of Dr. Bowditch's researches. I should not insist on this point, except for the purpose of giving to the conclusions which Dr. Bowditch and myself have obtained the additional weight that they deserve from having been arrived at by a second inquirer, wholly ignorant of and therefore unbiassed by the work of the first. Several efforts that I have made to obtain a copy of Dr. Bowditch's pamphlet have unfortunately failed, and I am therefore unable to give, as I had wished, an abstract of the observations which he brings to the support of his conclusion."

Electricity as a Therapeutic Agent.—Dr. Russell Reynolds sums up the "vital" effects of electricity as follows:—When the activity of a nerve is too great, as shown by tremor, pain, &c., we may relieve it by the continuous current. An interrupted current is best if we desire to put a muscle into action which is morbidly inactive; when there is spasm, the continuous current is beneficial. The continuous current will warm a cold limb. In certain forms of palsy and wasting, the nutrition of the muscles can be greatly improved by galvanization and faradization. Facial palsy, lead palsy, and essential paralysis are most speedily improved by the battery current, interrupted slowly. In wasting of muscles from long continued palsy from cerebral disease, faradization, again, is *more* useful than galvanization.—*Medical Press and Circular.*

Does Chloroform influence the Rate of Mortality after Operations?—Simpson believes that mortality has lessened since the introduction of chloroform. According to the figures of J. Arnott, it has increased in amputations by 12, and in lithotomy by 28 per cent. Mr. Erichsen is inclined to think that the rate of mortality has increased since the use of chloroform in operative surgery. When the nervous power is enfeebled, or the blood in an unhealthy state, undoubtedly Mr. E. is right when he says, chloroform does exercise a noxious influence on the constitution and lessens the prospect of recovery.—*New York Medical Record.*

DEATHS FROM CHLOROFORM.

Death from Chloroform in Vienna.—We learn from a private source that on Wednesday, Feb. 23d, another death from chloroform occurred in Prof. Billroth's clinic at Vienna. This eminent surgeon was about to effect forcible extension of the knee on a female aged 24, when in consequence of chloroform narcosis, hardly complete, symptoms of asphyxia prevented his proceeding with the operation. The operator at once commenced artificial respiration. The patient breathed regularly during one minute; but, before the interrupted operation could be continued, breathing became again irregular, and the pulse ceased to be perceptible. Tracheotomy was now performed, but to no effect, as the lungs acted only a few times. Finally, venesection and electropuncture were tried, but all in vain. The *post-mortem* examination showed small vegetations on the valves of the heart. It is to be noted that the pulse ceased to be perceptible before respiration stopped.—*British Medical Journal,* March 12, 1870.

Medical Miscellany.

MR. EDITOR,—I have to-day received a letter from Mr. Bullock, Superintendent of the Old Colony and Newport Railway, informing me that he has "arranged with the Boston and Providence Railroad so that delegates to the American Medical Association can obtain excursion tickets *via* either line, to and from New York, at seven dollars the round trip."

Delegates and members intending to go to Washington to attend the meeting will govern themselves accordingly.

Yours truly, HENRY I. BOWDITCH.
March 28, 1870.

FOREIGN JOURNALS.—We cannot recommend those who value promptness more than a saving of expense, to subscribe for foreign journals through American publishing houses. We sometimes receive three of a series of weekly journals at once, and the fourth say three days after, which shows that the first at least have been delayed. On entering a complaint, we were told that the publishers' correspondents let books and pamphlets accumulate till they have enough to fill a box, then forward all together. By sending subscriptions directly to the publishers of the journals, one gets each issue promptly by mail.

S. S. STAUFER, 646 No. Ninth St., Philadelphia, Gutta-percha Pessaries and Speculums. With this address, a ring-pessary has been left on our desk. It presents a smoother suface than the watch-spring covered with gutta-percha, which we have been in the habit of using. It remains for those who have tried it, or may try it, to speak of its comparative advantages.

WE have received from Atlanta, Ga., a prospective circular of the "*Cotton Zone*" *Central Journal of Medicine*, a monthly record of medicine and the collateral sciences, to be issued in the interest of the active practitioner of the "cotton and sugar zone," and edited by Wm. Abram Love, M.D., and others.

LET the "new beginner" read our extracts from Vogel, and he will think of them when confronted with an *enfant terrible* and reads in its mother's face the demand—a true diagnosis or your reputation!

CHLOROUS ACID.—Liquid chlorous acid, as described by M. Brandan, has a deep brown color, and is very fluid. Even below 0° the vapor exerts a considerable pressure. When freshly prepared the fluid boils about half a degree above 0°. If the fluid is suddenly brought to a temperature of about + 8 to 10°, it explodes with great violence. It cannot be kept without spontaneous decomposition. The gas given off from this liquid exhibits the well-known greenish-yellow color of chlorous acid. The specific gravity of the liquefied gas at 0°, referred to water at 4° (the point of greatest density of water), is 1·3298.—*Medical Press and Circular.*

MR. SQUIRE, of London, says the odor of chloral is masked by peppermint water.

ERRATA.—In the issue of March 24, the introductory remarks to the "Remarkable Case of Injury of the Brain," make it appear that Dr. Cooper furnished the report and the specimen at the request of the Editor; whereas the credit is due to Dr. J. B. Upham, who has taken great pains in the matter. Instead of "at our request," read *at Dr. Upham's request.*

In the Journal for March 10, page 177, line 8 from bottom of second paragraph, for "means" read *reason.* Page 178, line second of third paragraph, for "body" read *lady.* Page 179, line fifteen from bottom of second paragraph, for "vagina-uterine" read *vagino-uterine.* Page 180, line eleven from top of first paragraph, insert word *side* after word right.

TO CORRESPONDENTS.—Communications accepted:—Analgesia in Secondary Syphilis—Hydrate of Chloral—Genito-Seminal Neuropathia.

BOOKS AND PAMPHLETS RECEIVED.—A Hand-book of Operative Surgery. By John H. Packard, M.D., Philadelphia. With fifty-four Steel Plates and numerous Illustrations on Wood. 8vo. Pp. [illegible]12.—Reply to Dr. C. A. Robertson's Review of the Report concerning the last Illness of Dr. Alden March, by James McNaughton, M.D., Professor of the Theory and Practice of Medicine in the Albany Medical College. Re-printed from the New York Medical Journal, March, 1870. Pp. 16.

DIED,—In Natchez, Mi., Jan. 27th, Dr. Hugh Lyle, in his 83d year.

Deaths in eighteen Cities and Towns of Massachusetts for the week ending March 26, 1870.

Cities and towns.	Number of deaths in each place.	PREVALENT DISEASES. Consumption.	Pneumonia.	Typh. Fev.
Boston	102	15	10	1
Charlestown	3	0	0	0
Worcester	19	3	6	0
Lowell	19	2	2	2
Milford	2	0	0	0
Chelsea	10	2	3	0
Cambridge	10	0	1	0
Salem	8	0	2	1
Lawrence	8	2	1	1
Springfield	9	6	2	0
Lynn	15	2	1	3
Pittsfield	2	0	1	0
Gloucester	2	1	0	0
Fitchburg	6	1	1	0
Taunton	7	1	1	0
Newburyport	5	1	2	0
Fall River	7	3	0	1
Haverhill	4	1	0	0
	238	40	33	9

Worcester, Lowell and Boston each report one death from smallpox. From all the above-named places there are reported six deaths from scarlet fever, eight from croup and diphtheria, five from measles, and four from whooping cough. GEORGE DERBY M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending March 26, 102. Males, 57—Females, 45.—Acephalia, 1—accident, 3—congestion of the brain, 1—disease of the brain, 7—inflammation of the brain, 1—bronchitis, 5—burns, 1—cancer, 1—consumption, 15—convulsions, 3—croup, 1—diphtheria, 2—dropsy, 1—dropsy of the brain, 2—dysentery, 1—scarlet fever, 4—typhoid fever, 1—disease of the heart, 1—homicide, 1—infantile disease, 4—intemperance, 1—disease of the kidneys, 1—congestion of the lungs, 2—inflammation of the lungs, 9—marasmus, 6—measles, 3—old age, 3—paralysis, 2—pleurisy, 1—premature birth, 2—puerperal disease, 2—smallpox, 1—stricture of the urethra, 1—suicide, 1—ulcers, 1—unknown, 9—whooping cough, 1.

Under 5 years of age, 42—between 5 and 20 years, 6—between 20 and 40 years, 22—between 40 and 60 years, 18—above 60 years, 14. Born in the United States, 73—Ireland, 22—other places, 7.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

POSITION OF THE FŒTUS IN UTERO.

Read before the Obstetrical Society of Boston Feb. 12th, 1870, by B. E. Cotting, M.D.

The presentation of the child's head at the uterine outlet at the time of birth, with the occiput towards the mother's pubes, is so common that from the earliest times it has been denominated the Normal Presentation. This appellation is so reasonable that, could its propriety be doubted, the constancy of the presentation, the shape of the child's head, and, furthermore, the form of the female pelvis as seen *post mortem* from above downwards, before the muscles and other soft parts are removed, must together, if not singly, compel at once the assent of even the most hesitating.

It has also been admitted, for the most part, that the head rests over the uterine orifice during the latter portion of pregnancy, as well as immediately preceding delivery.

Thus much is generally conceded; but, strange as it would appear, were we not accustomed to it, most writers, ancient and modern, would fain have us believe that in its earlier life the fœtus has a different position; that is to say, in the same general direction as that of the mother, with its spine to its mother's spine, with its head upwards and facing forwards, or, as one has it, "placed as if looking through a little window in front." The assumption that it has this position, or would take it from the start but for reasons which they adduce, is to be found, avowed or implied, with almost all writers, from Hippocrates down to the last journalizers; and they have greatly puzzled themselves and their readers with learned attempts to account for the supposed reversal that must occur to bring it into the admitted normal position in which it is found at the later period.

We learn from the books that in Hippocratic times the fœtus was thought to be retained in the upright position by ligaments, which broke, at or about the seventh month, to allow the child by its own force to rotate, and betake itself to the normal presentation for delivery—the twists in the cord being instanced as proofs of exertions to effect this object. Children born before the eighth month feet-first were, according to this supposition, so born because of insufficient strength to accomplish the rotation.

Another leading hypothesis, said to have originated with Aristotle, and which has been advocated repeatedly from time to time since his day, was that of gravitation so called. By it the rotation was supposed to be brought about, sooner or later, by the greater proportionate weight of the head, or of the head and parts above the umbilicus—the fœtus being suspended, pendulum like, by the cord.

Subsequently, according to authorities, came the doctrine that the rotation was due to the agency of the uterus; then, again, to a combination of fœtal and uterine action; and, again also, to volition on the part of the fœtus, seeking the head presentation as the easiest to be born in.

Such were the opinions and hypotheses of past ages, variously modified by different writers; and such under various phases are those which have been entertained in modern times down to the present day; some of the reasons assigned for the head's seeking the uterine outlet then and now being equally absurd, for instance, then for want of food, now for want of space and air!* In nearly all, then and now, unless the whole argumentation is without a purpose, the great effort has been to show how from a position thus taken for granted, or supposed to be occupied from the start, and one which theoretically it ought to continue in, the fœtus gets turned head downward at the appointed time for delivery. This effort is as apparent in the fanciful speculations of Simpson, now sustained in some quarters by a temporary popularity, as in the grosser theories of Arantius or Levret, whose doctrine of the *culbute*, or somerset, had a much wider influence in its day, and still finds adherents amongst the vulgar, and possibly even in the profession. Indeed, it was the accidental disclosure of some such views where least of all expected that led to this present paper.

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* "M. Drelincourt dit c'est l'abondance du meconium qui devient àcre, et qui excite dans le fœtus des tranchées et des acces de colique * * * * rompant par ces efforts les tuniques qui l'envellopent," &c.

Viardel, Paris, 1748.

With regard to all these doctrines, it is sufficient to say that they are all gratuitous hypotheses, resting upon the merest suppositions, as is evident from the fact that no sooner is one of them enunciated by its author than its absurdity is exposed by rival theorists.

Thus, for example, Dubois shows up the fallacy of the doctrine of weight or gravitation; but, adopting the exploded theory of instinctive and voluntary determinations, is himself in turn showed up by Duncan and many others. Thus Duncan, taking the centre of gravity to be in the superior portion of the trunk (to vary a little the old notion) is refuted by nearly the same old arguments which upset the original of Aristotle. Thus Cazeaux, according to whom Dubois is more skilful in destroying than in building up, and according to whom "Delamotte, Smellie, and more especially Baudeloque, completely subverted" the culbute; thus Cazeaux, like the rest, "hazards" his favorite hypothesis by which the fœtus is caught in the various changes of form in itself and in the uterus, and "forcibly retained"; acquiring "mechanically a position which will bring its largest parts in correspondence with the most spacious portions of the organ." Thus, also, Simpson's theory that uterine shape and pressure produce, through the excito-motor system, reflex-motions in the fœtus, till by them it gets into an easy, that is to say, the normal, position for presentation, is crushed out by Duncan, who shows that in Simpson's assumptions "there is a very great error in reasoning and probably also in physiology," and until further proof be given, "all the author's conclusions remain without any basis whatever." And, finally, Scanzoni refutes everybody else, and himself also, in a score or more of learned reasons to be found in the various medical journals of the day.

But enough for hypotheses which may be left, now as of old, to prey upon and consume each other. They are all mere assumptions to account for what seldom or never happens; and bring to mind an incident which may not inappropriately serve to illustrate the kind of reasoning common to them all.

"That's a wonderful cat," said a domestic one day—"he looks up into the tree where the bird is, and, whatever it is that he does, the bird falls at his feet!"

"Did you ever see a bird fall in that way?"

"Indeed, sir, I've seen the bird *in his mouth!*"

Thus reason such theorists. The normal presentation is of the head; that is certain, and in the mouth. But to get the head over and above the uterine outlet requires a magic power, a culbute, or "whatever it is that it does" in that way. Such speculations hardly bear for any time the test of common-sense, are injurious to science, and ought to be avoided. Indeed, of late some writers, not satisfied with any one of them singly, seem inclined to lump a number together, and to declare, like Hodge, that the position, "with the head pendant, is determined not by one cause only, but by the conjoint influence of several;" or, if less credulous, to acknowledge, like Bedford, who in his last edition two years ago repeats the following admission:—"I should say in lieu of any one of these influences being *per se* sufficient to explain the position of the fœtus in the womb, the fact is due to a combination of circumstances not yet, perhaps, properly comprehended."

In a rational view, the position of the fœtus in utero, from its embryonic start to its expulsion, is simply a proposition in Natural History, and should be treated as such. Hence, in a word, it is to be settled, if settled at all, by the facts in the case, demonstrated by anatomical examinations and other careful observations.

As it is generally conceded that after the seventh month of gestation the head is pendant or over the os uteri, the question resolves itself into one of fact as regards the position antecedent to that time. To the period before the seventh month, therefore, the following remarks will be chiefly confined.

Although anatomists, as well as others, have been too much occupied with prevailing theories, some have from time to time recorded, too meagerly it is true, the results of their observations on the point in question. Among those most frequently named are Vesalius, Paré, Fabricius, Smellie, Hunter, Baudeloque, Velpeau, &c. Vesalius, or rather his pupils, find the head pendant most frequently; Paré is less positive; Fabricius admits this position; Smellie gives plates from nature which confirm it; Hunter also gives plates, in a majority of which the head is over the os. Baudeloque says that "the opening of the body, at whatever term of pregnancy, has shown many times (mille fois) that the head almost always occupies the inferior part of the uterus;" and Velpeau gives five cases of his own dissections, from the fourth to fifth months of gestation, in four of which the head was towards the os uteri.

In the limited time we have had for this paper we have found (as in White one at sixth month) other cases scattered singly here and there, actually examined by their reporters—all confirming the general fact so distinctly stated by Baudeloque. Smellie, it is true, alludes to "some authors, who allege that in opening women who have died in the fifth, sixth, and seventh month, they have found the child's head towards the fundus uteri," but he does not name them; and even if they are right, this is not more than is sometimes found at full term in abnormal cases. But Smellie himself, reviewing the whole matter, comes to the conclusion that "it seems to be the most reasonable opinion that the head is downward all the time of gestation."

We may therefore conclude, with due allowance for such exceptions as accompany every law in nature, that, so far as actual dissections have shown, the fœtus from conception to delivery continues in one position, and that the head as a rule is towards the uterine outlet and maintained there throughout pregnancy.

Baudeloque states also that the head most frequently presents in premature deliveries; Smellie asserts that "when women miscarry in the fourth, fifth, sixth, and seventh months, the head for the most part presents itself, and is first delivered; Velpeau says that head presentations are nearly as frequent in abortions as at full time, being in his own experience twenty-one in twenty-five cases; and so, many others. These statements have been confirmed also by prominent practitioners whom I have personally consulted on the subject. Our late lamented associate, who had so large a practice (eight thousand cases in forty years in private practice only), told me that, in his experience, head presentations were about as frequent in premature deliveries as in those at full term. I myself have been at the bedside and noticed a fœtus of less than two inches in length pass the vulva with the head presenting—a trifle, but valuable so far as it goes. It was a case of self-induced abortion. I have observed the same presentation at more advanced periods in similar circumstances. I have also examined ova, whose direction of exit had been carefully noted, and found the embryo in the same general position as at full term. And so have many others.* The assertion of Simpson that "prematurity of labor is a cause of the malpresentation of the fœtus," and of Duncan that the "death of the fœtus in utero is a frequent cause of malpresentation," are assumptions disproved by the very arguments brought to their support. It would be much more rational to attribute such presentations and such deaths to original malposition, in itself abnormal, which must always give rise to inconveniences, and sometimes to disturbances sufficient to interrupt life and cause abortion. An effect like this we have recently noticed, in a case of a fœtus of about five months which was completely doubled upon itself, the middle of the back presenting. This position caused great disturbance in the uterus, discomfort to the mother, death of the fœtus, and premature delivery.

According to Velpeau and others who have practised ballottement at very early periods, the head is almost always found presenting as soon as any part can be made out by this procedure.

On auscultation also, the intensity of the fœtal pulsations is to be noticed, from the first, in the lower half of the mother's abdomen, a little to one side of the median line, this portion being occupied by the spine and thicker parts of the back of the fœtus.

Thus, without going further, although the further we go the stronger the evidence, *post-mortem* examinations disclose the head at or towards the uterine outlet at all stages of development; the ovum, so far as yet possible to make out, shows the same general position of the embryo; premature deliveries give normal presentations most frequently, if not as frequently as complete gestation; ballottement discovers the head pendant; and auscultation the occupation of the median anterior portion of the uterus by the spine and back of the fœtus. Thus we have these, and other similar demonstrations, not suppositions, all determining the general fact that from conception to full term the fœtus lies, or tends to lie, in its mother in a position completely the reverse of that of the parent: and also, so far as has been noticed and recorded, that, from the beginning, as certainly at later periods, its face is turned opposite to its mother's face, feet opposite to feet, back opposite to back, abdomen opposite to abdomen, &c. &c.—with a tendency, perhaps, to be cast off prematurely if exceptionally in any other position.

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* Duncan quotes Hohl as follows:—"We have examined a series of unopened ova, and have always observed that the embryo reposing in the liquor amnii lies with the head lowest. We have in a considerable number of autopsies of pregnant women, not advanced to the seventh month, never once seen the breech lying lowest, if the corpse had not been disturbed."

Moreover, we find the same to be true of animals having a horizontal carriage of body, where of course the weight of the head, or shoulders, cannot have the effect ascribed to it in the human race, and where also the culbute, instinct, reflex-action, &c., would have rather "up-hill work." "At all periods of gestation in animals," says Aristotle according to Velpeau, "the young have the head presentation." In animals "the embryo," says Todd's Cyclopædia, "has a somewhat similar position in the uterus as it has in the human subject." "The head is mostly turned towards the os uteri." These statements from the earliest and the latest records accord with the observations of anatomists and other practical observers, past and living, so far as we can ascertain. They relate to facts having a broader significance and a wider purport than that embraced in the narrow hypotheses of the theorists, ancient or modern.

As to the multiparous, the fœtus nearest the outlet presents normally—as we ourselves have seen—while the rest are arranged so as to follow in the same way.

And still further, the same rule holds good with the oviparous. As we have it from the highest living authorities, the egg, from its earliest development to its expulsion, always keeps the one end—the head end as we may call it, the larger end when so shaped—in the same direction, and this, too, whether fecundated or not; while the contained chick is always maintained in the one and same position, with relation to the axes of the egg, even before it has taken sufficient form to be cognizable by the naked eye. The mere mention of gravitation, voluntary or instinctive motion, and especially of reflex action, in such connection, is sufficient to show the absurdity of these fancies, and of argumentation dependent upon them. What, forsooth, has gravity to do with the presentation of spherical bodies, as many eggs are even at term; how can voluntary motion exist before there is a fœtus; what chance is there for reflex action in an unimpregnated ovum covered with a calcareous shell?

Thus we see, on a comprehensive view, however cursory, of the realities and matter-of-fact workings of nature, that the speculations of theorists, however ingenious and captivating, have no solid foundations to rest upon. The theories of "instinctive or voluntary motion," and of "reflex action," are misty fancies, explaining nothing, while befogging and bewildering the practical searcher into the secrets of nature; and "gravity," if it ever have anything to do with vital development, can be only occasional and temporary—even as gravity itself, for aught we know to the contrary, may possibly be but an exceptional influence in the grand evolutions of systems making up the totality of the universe.

We all may admire the wonderful adaptations of these arrangements, and acknowledge the wisdom thus displayed in the present conditions of animal existence, but we cannot explain why the present plan was adopted in preference to others, any more than we can explain the origin of life, say why the earth turns west east, or show cause why a tree spreads its branches like an oak or droops them like a willow.

It has been said in reference to a kindred matter, that "it appears wonderful that so many physiological absurdities should have been so easily adopted by the profession"; but an unwillingness to accept a common fact or law unless accompanied by a marvellous interpretation, seems to be a universal infirmity, common alike to the learned and the low. *Credo quia absurdum est* belongs to no one class exclusively as a frequent foundation of belief. A bird in the mouth by ordinary seizure is nothing unless ascribed to a previous charming by the captor. A marvellous interposition of gravitation, a culbute, instinct, or reflex-action—assumed to account for a reversal, never yet proved, of a hypothetic position; a reversal if not impossible, in the very highest degree improbable—seems more acceptable than a simple statement of observed facts, reasonable in itself and involving no interruption or irregularity. Moreover, exceptional cases are apt to receive more attention than is due to them; and too frequently they are made the basis of theory and argumentation—even to the overlaying of the rule itself. Nevertheless we are confident that we have been expounding, though very imperfectly, a LAW OF NATURE, which, as such, will be found the more firmly established the more it is examined and studied; and which, some time or other, will be fully acknowledged as a *Part of the Plan of Creation.*

FEEDING CHILDREN.

By a Retired Galactanere.

Do you always manage to get one cow's milk? Do you always succeed in finding a wet nurse? Is Liebig's food a good thing, or is it Big-lie's food? What do you think of groats, and barley, and whey? I always put the children on one or the other, in spite of the doctor. What does *he* know about babies? My baby began to eat baked beans before it had teeth. Mine always goes to the table, and if you could only see it crowd in the potato and cranberry sauce!

Well, the tough ones live. Sometimes they grow up tough, and then again they don't. So I have thought, when I have listened to statements and questions as above. Now, my dear sir, since you have asked my opinion about the one-cow's milk, and since I have retired from the trade and it can't hurt me; and considering that everyone's *own* milk man is *the* honest one (just as in your business every one's *own* doctor is the best), I'll give you a specimen of how we used to do it, when milk was five cents a quart.

We used to call it morning's milk. That was because we left it for customers in the morning, and part of it was milked in the morning—of the day before. I started for the city, in summer, at about two o'clock. After my man had got up and milked our two cows, and had eaten his breakfast, he harnessed up the other horse and wagon, and drove round for the milk, which was to be fresh to-morrow morning. Mr. A. let us have a gallon or two; Mr. B. a quart or two. Mrs. X. didn't make butter that year, and Mrs. Y. had stopped cheese making, and they had four or five gallons apiece. So on through the town. He picked up a pretty lot in all, and every week I paid for it—nine cents a gallon. This was by the beer measure, so called, and each gallon held two hundred and eighty-two cubic inches. We sold it for five cents a quart. This was by wine measure, and each gallon held two hundred and thirty-one cubic inches. We must live, you know.

The man got home at about the same time that I did. We scalded out the cans I had brought home, and put the others in a cool place for to-morrow. There they stood till evening, some ten or eleven hours, when, as I had certain customers who were willing to pay twenty cents a quart for cream, and a man must live, we poured off about two quarts from the top of each can. Well, that's cream.

But there are meddlesome fellows, females most of them, who would say your cans have too much room in them, and the milk shakes about and it gets spoiled. A couple of quarts of water to take the place of the cream rectifies that. But some other meddlesome fellow may put a lactometer in it and find it don't weigh enough. Oh, a little common salt fixes that. But the color is too blue. We may be accused of selling skim-milk. True, I forgot that. Molasses brings back the color, gives it richness in look, and, with the salt, its flavor is all right.

I was one of the honest milkmen, and if there was a little cheating, a man must live, you know. Faxon never heard of any one's suspecting me; if he did, he never could prove anything, and never told me anything about it.

I knew one doctor whose boy was brought up on one cow's milk at an extra price. *That* of course, for it is very hard to keep milk from mixing. The doctor bought his own cans, and the boy grew astonishingly well, and the milk man got two cents extra on the quart for *that* milk. Once or twice the doctor watched, and saw the dealer mix the milk, round the corner. He afterwards found out that all of this man's supply came from the Westboro' Milk Company. But then a man must live, and wasn't the milkman a church member?

Moral.—Don't ask too many questions, and don't employ a milkman who makes loud professions of piety.

HYDRATE OF CHLORAL IN CHOREA HYSTERICA.

By Dr. A. Briess, of the General Hospital in Vienna. Translated from the Wiener Medizinische Presse, by D. F. Lincoln, M.D.

In spite of the numerous experiments which have been made with this new remedy, it is certain that we are not yet in full possession of the evidence requisite to a final verdict upon its merits. No doubt, the future will settle for us the exact indications for its use, as the past has done in the case of so many other well-known remedies. Drasche believes that as an anæsthetic it will scarcely attain the importance of chloroform; and Benedikt warns us against giving large doses in affections of the brain, lest congestion and cerebral hæmorrhage may (possibly) result from its action. Liebreich considers that its range does not require so much limitation. He gives it even to small children, when cerebral congestion excludes the use of morphine; employs it during minor operations upon the extremities, and in ophthalmic surgery, and considers that there is no objection to extending its use to severe operations, in case a suspension of the narcosis be not absolutely required. According to Bouchut, it must not be given to persons who have a cerebral or a cardiac disease. Many make a more extended use of it, especially in mental diseases, and with good results. Levinstein found it of the greatest benefit in cases of extraordinary dyspnœa dependent upon disease of the heart and lungs. He names, as the only circumstances prohibitory of its use, gastric disturbances, and ulcerations of the fauces, œsophagus, stomach, posterior wall of the larynx, &c.

While the views of different observers are so contradictory, and the price of the drug is so high, it will be hard for it to find universal acceptance in practice.* But there are cases in which nothing ought to deter the physician from accepting the remedy with gladness, in the hope of securing some alleviation of the symptoms present. Such a case has lately come under our observation; and we now propose to relate it *in extenso*, in an entirely objective form, leaving inferences to our readers.

The following is the history, as chronicled by myself, conjointly with my colleague, Dr. Hesky, the second assistant physician in this department.

On the 22d of November, 1869, the patient, M. M., aged 22, was brought into the ward on a stretcher, to which she was held down by the aid of five men and several women. Even this large escort was not able to lay her quietly in bed. She jerked her body upwards, and to both sides, with such violence that the pillows were soon in the middle of the floor, and the freshly-made bed was in the utmost possible disorder. It was necessary to apply the "girts," to keep her from throwing herself out of bed. The muscles of the face, trunk and extremities were constantly twitching; the motions of throwing, jerking, extension, flexion, pronation and supination, were not even moderated for so long as a minute at once.

The patient's health is said to have been always good. Menses commenced in the 15th year, always lasted about a week, were tolerably abundant, and were neither preceded nor accompanied by any unpleasant symptom whatever. They are said to have appeared for the last time three months ago. Six weeks ago she married. On the wedding-day her step-mother says that she noticed the girl making some convulsive movements with her hands about her apron, while standing before the altar. She had never been observed to make such motions before. A few days previously, however, she had been very much elated in spirits at the prospect of marriage, and this fact was supposed to have some connection with the twitching of the hands. Three weeks before admission, the whole body became similarly affected to a very slight degree. During the last eleven days the motions had increased very much. A white powder, given by a so-called "bather," had only made matters worse. During these eleven days she took no nourishment except soup and water, nor did she once close her eyes in sleep, so that her husband and friends, unable to endure the fatigue of watching her, brought her at last to the hospital. The husband informed us that they had had sexual commerce for several weeks previous to marriage, but never to excess, and that he had never perceived anything remarkable in her conduct during or after the act.

After careful and continued observation we were able to analyze the patient's movements into distinct actions, as follows:—

The head is most frequently thrown backwards, sometimes to the right or left, and rarely forwards. The forehead is often wrinkled, the eyelids are sometimes opened forcibly, and sometimes quickly closed. The eyeballs roll constantly.

The pupils are uniform, rather contracted, and react well to light. Alæ nasi very widely dilated; snuffing very frequent. The mouth is often opened to its greatest extent, and then shut so suddenly and violently that the teeth strike each other. The tongue is literally jerked out instantaneously, pointing generally to the left; then it is suddenly drawn back with a single motion. It has a whitish coat, and is moist; the lips are dry and fissured, causing the patient great discomfort. She often tries to reach them with her hands, but before accomplishing her wish she has to go through a long series of apparently aimless movements, throwing and twisting her body hither and thither, in and out. The extremities are in continuous action; the movements of various kinds cannot be followed by the eye. One foot, for instance, is thrown outwards against a board placed by her, while the other is drawn up and down, or kicks in the air. A similar, and yet more complicated play is carried on by the hands. The whole body suddenly assumes this extreme degree of pronation or supination, threatening to fall out of bed in spite of the strong bandages; and coverlids, mattresses, and everything not firmly fastened, fly about in disorder. The ordinary apparatus for confining unruly patients, and those with delirium tremens, is not sufficient; the girl's movements are so continuous and so violent that she tears the girts, and injures herself by rubbing against the rougher portions. A sheet is folded broad and laid over the legs, then passed under the bed and tied there; a second and a third are similarly applied over the chest and abdomen, while smaller pieces of cloth, fastened to the sheets, confine the hands and feet near together in the middle of the bed. Finally, every projecting bit of wood has to be padded in order to prevent severe contusions.

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* Since this was written, the price has fallen to about two-fifths of the price named; and it is to be hoped that the objection on this score will soon be done away with.

The patient's body is pretty well nourished; the breasts are firm, without milk; abdomen rather soft, not distended, not painful; some gurgling in the latter. Temperature slightly raised, pulse hard to count, 100–108. Respiration cannot be seen or counted. Violent sobbing at times. Consciousness not obscured. The patient sometimes makes herself understood, though with difficulty; she complains of great thirst, and when the movements are violent she asks to be bound faster. When she attempts to execute any voluntary motion, the greatest variety of counter-motions first come into play, and finally the purposed movement is quickly and hastily accomplished. The urine is passed in bed. Pressure upon the vertebral column calls forth no expression of pain. Nothing solid can be swallowed, and even water has to be carefully introduced by means of a rubber teat. Swallowing is difficult; and when a little too much water is introduced at once, she chokes badly before she can force it down.

At 4½, P.M., about half a grain of acetate of morphine was injected. In fifteen minutes she slept; but awoke in about half an hour, and the movements became much more violent than before. At 9, P.M., a second injection was made, with the same quantity of morphine, which was followed by an unquiet sleep of nearly an hour; and on awaking, the restlessness again became so great that the patients were kept awake and in a state of great excitement all night. As the patient could obtain no rest, and was constantly losing strength, being unable to swallow scarcely anything but water; as the excoriations were continually increasing, and threatened to suppurate and thereby to expose her to the danger of pyæmia; as the patients in the ward were all unable to sleep, and besieged us with complaints, while many of them experienced various convulsive contractions, and one woman who had had epilepsy four years previously was in dread of a fresh attack: for these reasons we decided without delay to have recourse to the hydrate of chloral, hoping at least for some calming effect, and on the 23d of November, at 10, A.M., we gave her one-half of the following:—

℞. Chloral. hydratis, drachmam unam.
Syr. simpl., aq. dest., aa. unc. semis.

Care was taken that none was spilled in swallowing. In *three minutes*, the movements were less violent. In *eight minutes there was perfect quiet.* The head was somewhat inclined backwards, the eyes and mouth were half open, the face rather cyanotic, the respiration deep, regular, 18 or 20 in the minute, the pulse, felt in the radialis and seen in the carotis, 92, the temperature somewhat elevated, the skin moderately damp, the sensibility normal.

In ten minutes, a slight twitching of the extremities occurred, owing to the noise made by a stick of wood falling in the kitchen; then again perfect quiet. After twenty minutes, respiration 18, pulse 88. In thirty minutes, twitchings during two seconds, while another patient was coughing violently; the tongue was thrust out, the head slightly moved, and then sleep returned, the eyelids being more nearly closed. In thirty-five minutes she awoke, and began to be restless, with slight intervals of quiet; and presently the jactitation was general and most violent, while the urine was passed in bed. After quarter of an hour, the restlessness continuing, one-half of the remainder of the medicine, or about 15 grains, was given in small portions at a time. In four minutes sleep followed, which lasted uninterrupted for half an hour; then slight twitchings during five minutes, sleep for ten minutes, violent jactations for five minutes, sleep for ten minutes, severe twitchings for an hour, and then sleep for three-quarters of an hour. Upon waking, the restlessness was very great, and the remainder of the chloral (15 gr.) was given. During ten minutes the patient called frequently for water; and then slept. Temp. raised considerably, resp. 18, pulse 80. The bleeding excoriations on the back and limbs were washed and dressed. In thirty-five minutes, a few seconds of slight twitching; then ten minutes of calm sleep, then some twitchings, fifteen minutes of quiet sleep, ten minutes of moderate jactation, an hour of sleep with few interruptions, and finally very violent twitchings and movements, and loud, inarticulate crying. At 5, P.M., another half-drachm was given, and during the remainder of the time until the next morning the patient alternated between quiet sleep and moderate convulsive disturbances, sleeping, however, the greater part of the time. Drank four tumblers of water during the night. Pulse 72, resp. 12.

Nov. 24th.—Frequent and urgent requests for water. Great unrest, with little sleep. At 9¼ half-a-drachm of chloral was given at once. Sleep followed in four minutes, which lasted with very brief interruptions three or four hours. In the afternoon, almost three-quarters of an hour of nearly perfect quiet, while the patient was awake. She spoke quite intelligibly and connectedly. Great restlessness for fifteen minutes about 5, P. M. Ate ten plums, and drank some milk, and then rested till 7. From that time until 9¼, there were several very disturbed periods. At that time she was given a third of the following:—

℞. Chloral. hydratis, drachmam,
Mucil. gum. arab.,
Syr. cort. aurant., an. unc. sem.

This mixture seems to have been very repulsive to the patient, who could not be made to drink the whole dose. Slept a good deal, and had also a good deal of disturbance, during the night.

Nov. 25th.—From 10, A.M. to 4, P.M., awake, with very slight disturbance. Took milk and soup. Urine drawn with catheter. Slept very well on the night following, waking only four times, with very slight twitchings.

Nov. 26th.—The fetters are taken off. Thirst much less troublesome. Says she is hungry. Swallowing is still difficult. Speaks distinctly. No stool as yet. Urine drawn with catheter.

Nov. 27th.—The patient is quiet for the most part, and speaks some connected sentences. The twitchings are now only local. Her hand jerks when she grasps an object, but she can take the glass and drink from it. The muscles of the face sometimes twitch while the trunk and extremities are quiet.

Nov. 28th.—Status idem. Three large stools, the effect of a laxative medicine.

Dec. 1st.—The patient leaves her bed; her appetite is excellent. She speaks quite fluently, and makes very few noticeable motions, mostly with the upper extremities. The head is seldom thrown to one side or the other. Refuses a dose of ½ drachm bromide of potassium.

Dec. 4th.—Can eat solid food without any assistance, and goes about all day. Accompanied by another patient, she descends one flight of stairs and crosses several court-yards, on her way to the bath.

Dec. 5th.—Feels worse after the warm bath.

Dec. 6th.—Flor. zinc., a knife-point full, three times a day.

Dec. 9th.—Condition the same. A cold douche-bath was not agreeable to her.

No treatment since the use of chloral had appeared to be followed by any improvement, but, on the contrary, the twitchings had become worse. A scruple of hydrate of chloral was therefore given night and morning. After taking it the patient became much quieter, without going to sleep; her speech was quite clear and distinct, her head never affected; the chloral burnt her mouth somewhat, but though she disliked it she took it readily.

An examination showed that the vaginal portion of the uterus was in a virgin condition, and the whole organ very little enlarged, not at all answering to her supposition of a three months' pregnancy. Breasts firm, and without milk. Vagina not particularly hot. Fundus and os both distinctly inclined forwards (anteflexion).

Hydrate of chloral was given for three days in the above dose (℈i., morning and evening). The muscles have become very much quieter. The patient feels not the slightest bad effect from the continued use of the drug; never is put to sleep by the dose of a scruple. Appetite normal.

Dec. 14th.—A little debility remains. She had grown very lean and very pale, but is now strong again, and eats all kinds of food with a good appetite, goes about all day and makes herself useful in the ward in all kinds of ways. Takes 10 drops of tr. valerian twice a day. Peculiar movements can hardly be perceived; and on Dec. 23d, she was discharged, cured.

Dr. Nott, in an article on the treatment of endometritis by uterine injections, says that it is the only treatment in which he has any faith, that it is not attended with danger, if properly managed, and that the objection urged against the treatment arises "1st. In want of a proper instrument for injecting the body of the uterus. 2d. From articles too irritating to suit the condition of the organ."—*California Med. Gazette.*

Reports of Medical Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.
CHARLES D. HOMANS, M.D., SECRETARY.

JAN. 24th.—*Congenital Opacity of the Cornea; progressing.* Dr. BETHUNE reported the case.

A woman, 25 years old, applied to him with this affection; it involved about one third of the cornea from the upper edge down, looking like ground glass at its upper part, while the lower edge resembled the crescent of the finger nail, being white and dense. The mother of this patient noticed at birth an opacity the size of a pin's head on the upper edge of the cornea, which has gradually increased.

Dr. Bethune considered the case of rare occurrence, he having seen but one or two instances before.

JAN. 24th.—*Treatment of Scabies.*—Dr. WHITE said the quick treatment of this disease is almost universally employed in Europe now; for this purpose Hebra uses the alkalies and sulphur mixed together, combined with oil of cade, or in the form of Vleminghx's solution. One thorough application of the latter is generally sufficient; but when used in this way causes much smarting and eczema afterwards. It is better, therefore, to use it less vigorously and on three consecutive nights. Lately, styrax and Peruvian balsam, which contain the same chemical principles, have been used; they are pleasant and unirritating. Recent observations show that the itch insect will live submerged in styrax two to three hours; in Peruvian balsam twenty to thirty minutes; in oil one to twelve days—as long, in fact, as in dry air. A single application of Peruvian balsam, or of styrax, four parts of the latter to one of alcohol, or olive oil, well rubbed in and left on all night, will cure the disease.

To Dr. BETHUNE, Dr. WHITE said that soft soap would cure the itch if applied efficiently and often enough, but the process was a long one and generally caused eczema.

Dr. BETHUNE said he had cured mange in a cat with soft soap.

Dr. WHITE said that the animal on the cat was different from that on man.

Dr. ELLIS said that the disagreeable odor of Vleminghx's solution would be more or less disguised by the use at the same time of oil of anise.

Dr. WHITE preferred the oil of bergamot for this purpose; but said that point might be decided according to the taste of the patient.

Dr. SINCLAIR had heard recently of a boy in the woods, living on rough food, who became covered with lice; he took a tallow candle, rubbed himself well with it from head to foot, put on his clothes, and and had no more trouble from these insects.

Dr. WHITE said that it was doubtful if the itch insect had any true respiratory apparatus, as shown by its living so long in oil. Its burrows have to be opened to allow the parasiticide employed to come in contact with the adult female or her eggs.

FEB. 14th.—*A large Tumor from the Abdomen of a Child; with Remarks upon the Value of the Microscope in the Study of Morbid Growths.*—Dr. JACKSON showed a photograph of a child aged 3 years and 3 months, which he had recently received from Dr. Charles Goodwin, of Wakefield. There was great emaciation, but the abdomen was perfectly immense, and uniformly so. The enlargement commenced last June, and was unattended with pain or loss of appetite; and there was no vomiting until the last few days.

With the photograph Dr. J. had also received a fresh tumor that was taken from the abdomen, and that weighed fifteen pounds. It was quite defined, of a rounded form, was somewhat irregular externally, and showed prominently above the surface a considerable portion of one of the kidneys, throughout its whole length, and perfectly healthy in appearance. On incision, the mass presented different appearances in different parts, as such growths usually do. To some extent it was perfectly encephaloid, and in its literal sense, with extravasated blood scattered through it in small quantities; and it was quite moist and shining, as from an infiltration of yellowish serum. The rest was of a coarser structure, more dry, without effused blood, varying in color and consistence, but generally light, and nowhere firm—and without any further trace of encephaloid. It was also somewhat lobulated, and the different lobules varied in some parts considerably, as they lay side by side. The kidney was as healthy beneath the surface as before it was cut into; but it was soon entirely lost in the disease. Upon the external surface of the mass were several lymphatic glands perfectly healthy, as the other organs of the body were said by Dr. G. to have been.

In regard to the nature of the case, Dr. J. said that the gross appearances of the mass were such as had always been supposed to indicate "cancer," or malignant disease; and, in the common acceptation of the term, that was what he believed it to be. It originated, he thought, in the kidney, notwithstanding the perfectly healthy condition of a portion of the organ. The absence of cancer in any other part of the body is of no great account; the law in regard to different organs being affected is generally true, but too often violated. The healthy condition of the lymphatic glands, lying as they do, directly upon the mass, was certainly very remarkable upon the above presumption. Dr. J. believed that the disease clinically was so far cancer that if situated upon a limb, amputation would not have saved the patient.

As to the microscopic appearances, they would probably vary more or less in different parts of the tumor as the gross appearances did. Until recently, it has been thought that the question of cancer or malignancy could be determined by the presence of cells of a certain character, but it is now well known that such is not the case; and some pathologists, finding that the microscope is not to be depended upon, seem half inclined to give up the use of the term "cancer."

In a scientific, or anatomical point of view, it may be, and undoubtedly is very interesting to examine a morbid growth in its elements, with the greatest minuteness; but, if the microscopist cannot tell the surgeon whether the disease for which he has amputated will or will not probably return in the stump or in some internal organ, his examination has been of no great practical account. Dr. J. believed that, with all the attention that is being given to the microscope, our knowledge of morbid growths must be, as it already has been, greatly increased; but if one depends too much upon it he will make some great mistakes, as many auscultators did formerly, when they depended upon physical signs and to the comparative neglect of symptoms.

In order to determine the nature of a morbid growth, and, during the life of the individual, its probable tendency, it is necessary in many obscure cases to get all the evidence that we can have—to study the clinical history of the case, and to examine the gross and microscopic appearances of the structure. And, if these last are both doubtful, as is not unfrequently the case, Dr. J. believed that one who is well and equally well acquainted with both, will generally form a more correct opinion in regard to the question of malignancy, so far as it is possible to form one at all, if he depends upon the gross appearances. Dr. J. further thought that, in the present state of science, if one who was well acquainted with both appearances, should take the whole range of tumors and allied growths, however apparent or doubtful their nature might be, and undertake to decide upon the question of malignancy by an examination of their gross appearances alone or their microscopic appearances alone, he would find that, on the whole, the first were the most reliable.

Dr. Coolidge said that, on a careful microscopic examination, the growth was found to consist of innumerable cells in an amorphous intercellular substance, kept together by loose connective tissue. In some parts this was more abundant than in others. Where the growth had broken through the membranous envelope it contained no fibrous tissue. Innumerable cells, generally round, were lying close together in an amorphous, albuminoid, intercellular substance, which was hardened by astringents, but which while in its natural state could be rubbed into a semifluid mass by the fingers. In the harder and interior parts of the growth there were long fusiform cells coiled into bundles or stretching through the mass, and other fusiform cells. All these elements, with the connective tissue, did not seem to be arranged on any plan, but were mixed up in no definite way. There was none of the character of carcinoma, or cancer, in its limited meaning, about the growth, which was a sarcomatous development. Bloody effusions in these growths depended on their vascularization.

Dr. Warren showed a section of the tumor prepared for the microscope. In those parts of the tumor which were near the kidney there was a structure similar to what is usually seen in carcinoma, viz.:—a well-marked alveolar stroma, enclosing masses of cells in its meshes; at other points no distinct stroma was made out, and the tumor here presented a sarcomatous appearance.

(In reply to Dr. Jackson's remark that the tumor had so cancerous a look, that he should consider it as such, whatever the microscope might show) he said he had seen in Berlin a tumor quite as encephaloid in look as this one, and clinically malignant, metastatic deposits being found in several organs. It was supposed by Frerichs to be carcinoma, but when examined by Virchow it was found to be sarcoma.

The term carcinoma or cancer, as used by the German pathologists, is an *anatomical*, not a *clinical* one.

FEB. 28th.—*Sudden Death near the Close of Pregnancy.*—Dr. COTTING reported the case.

Mrs. ———, aged 44, short and stout; usual weight 170 to 180 pounds. Mother of six children; youngest nine years old. Again pregnant, and within ten days of full time. Had no more than the usual inconvenience attending such a state. Drove or walked out almost daily. Had some swelling of extremities, which in part subsided on leaving off garters. A little irritating cough at one time troubled her, but this had nearly abated.

After a day of noticeably good condition —having walked out, eaten a hearty dinner, and a sufficient supper, and having been up and down stairs at 9, P.M., to put the youngest child to bed—she retired at 11, P.M., and, with the exception of a slight interruption by the child a little after midnight, slept soundly until 5, A.M., (Feb. 17th).

Awaking at this hour she desired to get up, and was assisted to a chair by her husband. On arising from the bed, there was a discharge of liquid, and she thought the "waters had broken." On this account, and fearing that labor might possibly come on unexpectedly, at 6 o'clock she sent for her physician, who arrived in about a quarter of an hour. He found her sitting in her chair, fearing a tedious dry birth, but panting for breath, and with all the appearance of one sinking. Her mind was perfectly clear, as it was to the last moment. She was quite cheerful, without the least suspicion of danger, being only, as she said, "nervous" and "short breathed." She asked to have the window opened, but did not insist upon it.

Her respirations were short and imperfect—45 to 50 a minute. By auscultation, no air was heard to enter the lungs below the spines of the scapulæ. Fine mucous crepitations were heard above. Pulse very rapid, feeble, and at times almost imperceptible. Countenance ashy white, with leaden hue along the lips. No motion of fœtus, or fœtal sounds over abdomen. "Fœtus quite active a day or two before."

The bed was immediately prepared, and so arranged that she could take a sitting posture in it—fearing, as she said, to lie down "lest she should smother." She walked to the bedside, sat down upon it, was adjusted into a comfortable position, and warmth applied to extremities, &c. Digital examination showed no progress of labor; and the presentation was too high to be made out. The membranes did not appear to be broken. There were no labor, or other pains from first to last, nor any appearance of suffering except from imperfect respiration.* She took a solution of carbonate of ammonia; and quite freely of brandy and water, asking for more of the latter a moment or two before she died. Respirations became shorter and shorter, and less perceptible, until at 7¼, A.M., without struggle or appreciable sign, she had ceased to breathe. Immediately there flowed from the mouth and nostrils a thick, ropy, perfectly white fluid, of a pasty consistency, and completely filled with the minutest air bubbles.

Request for an autopsy not granted.

Dr. FIFIELD said that sudden death in the puerperal state had for a long time been a subject of attention by observers and writers. Among the latter, Mordret of Paris had produced a thesis crowned by the Imperial Academy of France, entitled "Concerning Sudden Death in the Puerperal State." Many cases were given in this work of sudden death occurring both at the time of and some weeks after delivery, when everything seemed to promise most favorably. Mordret attributes some of these events to the impoverished condition of the blood, which he holds to be the usual condition of that liquid at the termination of gestation, predisposing to œdema, sometimes of the lungs, and to the occurrence of syncope from the exhaustion of the nervous centres. Hence he counsels not to reduce the pregnant woman, or one newly delivered, to a low diet of gruels and teas, as is usually practised by nurses, but to allow beef-tea, soups, and even a moderate amount of stimulants; something after the old-fashioned plan of a glass of rum after delivery.

Dr. FIFIELD said that these sudden deaths often took place on assuming an erect posture of the body after sleep, such as rising from bed to pass water.

One case is given by Mordret of the death of a lady a fortnight after delivery, while standing up to comb her hair.

Dr. FIFIELD also related a case in his own practice of death taking place ten days after delivery. This person, who had been very well, and who had even been out of her chamber, rose in the night to pass urine. Returning to her bed, she asked to have her baby given to her to nurse. Before the attendant could turn to give her the child, she was dead. In this case there was no autopsy.

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* There was so little distress that the patient's husband says but for the supposition that labor might be impending, he should not have thought it necessary to send for a physician, for he did not himself see anything alarming even to the moment of death.

Dr. Jackson had seen but a single case of the kind, ten days after confinement; the patient was walking across the room and fell dead; nothing was found at the autopsy to explain this unforeseen event.

He thought the disease in the present case might have been congestion of the lungs, though there is generally greater distress in that affection.

Dr. Parks said some French writer he had lately read considered the death in a majority of these cases attributable to embolism.

March 14th.—*Sudden Death in the Puerperal State.*—Dr. Cotting, after referring to the case of sudden death in a healthy woman, eight or ten days before expected labor, reported by him at the last meeting, said that since then he had examined the work spoken of by Dr. Fifield (*De la Mort subite dans l'Etat Puerpéral, par le Dr. A. E. Mordret. 4to. Pp.* 182. *Paris.* 1858).

It is a "Memoire Couronné" on a question proposed by the Academy on cases of sudden death in the puerperal state *not explicable by ordinary and appreciable causes.*

The author, after stating that such sudden deaths occur from a speedy interruption of either circulation, respiration or innervation, maintains that even in asphyxia and syncope, the death really takes place from defective innervation. "C'est donc en dernière analyse au cerveau qu'il faut toujours rapporter la mort subite."

He further maintains that the sudden death is almost always due to a previously unobserved or unobservable affection going on in some one of the vital organs rather than to the puerperal state itself. "L'état puerpéral n'est point la cause essentielle de la mort, il en est seulement la cause occasionnelle." He says, however, that in the puerperal state there is a veritable polyhæmia, to which must be referred the plethora so common in the latter months. But this plethora, according to him, is only apparent, being of a serous nature, owing to an altered chemical composition of the blood in pregnant women; yet it may give rise to the same phenomena of congestion as plethora. Hence he considers lesions of respiration secondary rather than primitive, as dyspnœa, &c.—the result merely of nervous disturbance, though appearing to be caused by sanguineous or serous congestion.

Most of the work relates to sudden deaths during or after labor. Of the fifty-two cases cited therein, only four occurred before confinement. In one of these there had been an attack of paraplegia at the second month, and a sudden access of suffocation, at seventh month, without known cause. There was no relief, and death took place in three hours. Autopsy revealed old softening of the brain. In another case, the subject was found dead, and autopsy disclosed double and recent pleuro-pneumonia. A third case was very incomplete; from hearsay. Death, at seventh month, probably from nervous shock.

The remaining case was that of a girl æt. 24. Near full term. Felt ill on leaving her chamber and returned; took water; vomited; became oppressed with great and increasing dyspnœa. Calling to an assistant, said, "I smother," and soon died, one hour and a half from the attack. There was no syncope or loss of intelligence. *Post mortem* showed nothing to account for the death; the lungs were sound. Fœtus normal. This alone of all the cases resembles in any degree that reported by Dr. Cotting.

According to Dr. Mordret, in cases of sudden death before the full term, in default of organic lesion, the cause, with individual modifications, may be attributed to disturbances of the ganglions of the great abdominal sympathetic nerve—the susceptibility of the stomach in the puerperal state and the development of the abdomen being among the causes of such disturbances. "Les irritations de l'estomac reagissent très immediatement sur le plexus solaire, le plus important des centres nerveux ganglionnaires, et les irritations qui lui sont ainsi transmises peuvent être assez fortes pour déterminer la morte subite."

Syncope, so common in the puerperal state, Dr. Mordret would attribute to a similar cause; and he considers pregnant women predisposed by their situation to a so-called gastric syncope, at times a cause of sudden death in old age, inasmuch as they are almost always slightly anæmic and thus somewhat resemble debilitated old men; all this, too, arising from sympathetic or mechanical irritation of the solar plexus.

In short, Dr. Mordret, without denying the frequency and importance of organic lesions, believes that there are other causes of sudden death in the puerperal state which are inexplicable (insaisissable). He says:—"Je crois même que, dans le plus grand nombre des cas de mort véritablement subite, une petite lésion matérielle ne suffit pas pour expliquer la mort, et qu'il faut y ajouter l'influence d'une lésion nerveuse."

In the case reported by Dr. Cotting there was acccustomed good health throughout the pregnancy, and remarkably good near the last. The length of the fatal affection was not over two hours, so far as the patient or her family were aware of any disorder. Dyspnœa, from want of capacity in the crowded lungs to receive air, was the only prominent symptom. There was no primary or noticeable disturbance of the circulation. The stomach had not been susceptible, but remarkably undisturbed. There had not been at any time any show of nervous affection. The intellect was perfectly clear to the last moment of life.

Medical and Surgical Journal.

BOSTON: THURSDAY, APRIL 7, 1870.

ARTHROPATHY CONNECTED WITH PROGRESSIVE LOCOMOTOR ATAXY.

DR. MEREDITH CLYMER lays down the anatomical characters of Progressive Locomotor Ataxy as being sclerosis of the posterior columns, disintegration of the gray substance of the *posterior* (?) cornua, of the spinal cord; with atrophy of the posterior nerve roots, and sometimes structural change in the cranial nerves, chiefly the second, third, and sixth. (See JOURNAL of March 10th, p. 192.)

"In an article on Diseases of the Joints connected with Progressive Locomotor Ataxy, by Benjamin Ball, Professeur-Agrégé at the Paris Faculty of Medicine, occurs this passage:—

"'The researches of modern histologists, and especially of Valentiner, Luys, Lockhart Clarke, and Charcot, tend to connect progressive muscular atrophy with the destruction of the nerve cells which occupy the *anterior* cornua of the grey substance. Should further researches enable us to establish a constant connection between these two lesions, it will then be demonstrated that the nutrient centre of the muscular system resides in a given point of the spinal axis. But that which may be proved true according to this hypothesis, as regards the muscular system, may perhaps hold good, in an equal degree, in reference to the articulations, the health of which, in a great measure, depends on the integrity of the nervous centres.'—*Med. Times and Gazette.*"

(See our issue of March 17, p. 215.)

We now translate from the *Archives de Physiologie, &c.*, the following memorandum "on a Lesion of the Gray Substance of the Spinal Marrow, observed in a case of Arthropathy connected with Progressive Locomotor Ataxy," by MM. J. M. Charcot and A. Joffroy. It appears to relate to the same case as that which formed the basis of Dr. Ball's paper, from which the preceding extract was transferred to the London *Medical Times and Gazette.*

We have several times had occasion to allude, says MM. Charcot and Joffroy, to special forms of arthropathy, which manifest themselves quite frequently in the course of progressive locomotor ataxy, and one of us is compelled to allow weight to the arguments adduced in favor of referring the development of the articular affection in question to the influence of the spinal marrow. But, hitherto this hypothesis has received no support from facts in the domain of pathological anatomy; and for this reason it has appeared to us worth while to call attention to a case which may perhaps contribute to fill up the hiatus we have indicated.

[We insert here certain remarks which M. Charcot gives in a foot-note.—ED. Quite recently, in reviewing the work of Ball, M. R. Volkmann has expressed the opinion that the arthropathy of the ataxies results simply from the distortion undergone by the ligaments and articular capsules, in consequence of the awkward carriage of those subject to the disease under consideration. The cases, now numerous, in which the articular affection is seated in the superior extremities, occupying the shoulder or the elbow, suffice to show that M. Volkmann's interpretation is susceptible of no more than a limited application. Further, the influence of a purely mechanical cause cannot be invoked, as the chief agency at all events, even in the cases where the arthropathy is in the inferior extremities. As I have taken occasion to point out, on the basis of clinical observation, the articular affection is most often developed at a comparatively early stage of the locomotor ataxy, and whilst as yet the motor accommodation is but slightly or not at all impaired.]

The clinical history of this case having been related in the second volume of the *Archives*, and in a memoir published by Dr. Ball, we dispense with the details of that history at the present time. We will, however, mention that the subject was a woman who had been affected with locomotor ataxy for ten years and had been confined to her bed about four years, when, *without the intervention of any traumatic cause whatever*, she was seized suddenly with an enormous but perfectly indolent swelling of the left shoulder. The superior extremities had been the seat of only occasional darting pains, and of very slight motor incoördination, at the period when the arthropathy was developed. The latter had, besides, presented the group of symptoms, as well as the mode of evolution, of which one of us has traced the distinctive characteristics. It should also be noted that in spite of the intensity of the articular lesion, the movements of the shoulder, though impeded, never were entirely abolished.

Three months after the outbreak of the arthropathy, an obstinate diarrhœa set in, which, at the end of a few days, brought about a fatal termination. An autopsy was made. For the remarkable alterations presented by the different parts of the diseased joint, we must refer to the description given of it in Dr. Ball's memoir. It suffices to say here, that the lesions bore principally on the bony extremities. Thus, the head of the humerus and a portion of its anatomical neck had disappeared, and been replaced by a slightly excavated surface, smooth and eburnated at certain points, eroded and rugous at others. It seemed, as has been elsewhere said, as if the parts had been, so to speak, used up, by the reciprocal friction of the articular surfaces.

It appeared to us particularly interesting to inquire if there were not in the spinal marrow some other alteration than the scleroma of the posterior columns, the ordinary lesion in locomotor ataxy. With this end in view, the spinal marrow was plunged in a solution of chromic acid, for the purpose of subjecting it, at a suitable time, to an attentive study. The opportune moment having arrived, numerous transverse sections were made in different places. These sections were first colored with carmine, then treated with absolute alcohol, and finally subjected to the action of turpentine; when they were examined with the microscope under various magnifying powers. Here are the results of the examination.

In all portions of the spinal marrow, the posterior columns presented the sclerotic fascicular alteration proper to progressive locomotor ataxy. In the lumbar and dorsal regions, as is the rule in such cases, almost the whole of the posterior columns was invaded by the alteration; whilst in the cervical region the lesion occupied only a quite restricted triangular space, situated in the antero-posterior median axis, and progressively diminishing upwards. The antero-lateral columns were everywhere healthy. The grey substance, with its cornua and commissures, was in all points perfectly normal through its entire extent, except at the lower two-thirds of the cervical arch. In that region was observed a remarkable lesion confined exclusively to the anterior cornu of the left side. In all the sections made at the level of the two inferior thirds of the cervical arch the following appearances were met with. The anterior cornu of the right side, as well as the commissures and posterior cornua of both sides, presented, as in the other regions, all the characteristics of the normal state. On the other hand, the left anterior cornu was manifestly deformed and atrophied. It was, so to speak, contracted one-third in all points of its anterior diameter, while its transverse diameter had undergone a notable elongation. Beside this, it seemed to have been the seat of a change in shape, which had thrown it outwards and backwards, so that its internal angle was carried away from the anterior median sulcus. This was not all. A considerable number of the large nerve-cells were wanting in the axis of the left anterior cornu. It was the posterior external cellular group which appeared to have especially suffered; it being, at certain points, almost completely absent. The cells of the external anterior and internal anterior groups were, on the contrary, equal in number on the right side and on the left. It was not possible to determine precisely the character of the morbid process, which, in the left cornu, produced this change of configuration, and this disappearance of a certain number of nerve cells. We think ourselves in a position to affirm only that there were here neither foci of *granular disintegration* nor any very evident traces of fibrillar metamorphosis or of multiplication of the nerve nuclei.

Was there any relation whatever between this alteration in the grey substance and the lesion of the posterior fasciculi? It is at least probable that there was. It cannot be admitted, however, without reservation, that the morbid process of which these fasciculi were the seat was extended by regular approaches to the left anterior cornu. There was in fact no such propagation found. The grey degeneration of the posterior fasciculi occupied in the cervical region, as has been already remarked, only a very limited space, in the neighborhood of the median sulcus; and the parts of those fasciculi which bordered on the grey commissure and on the posterior cornu appeared exempt from change.

The lesion which has been now described was found to be entirely limited to the anterior cornu of the left side, throughout the whole extent of the cervical arch. But, it progressively diminished toward the medulla oblongata, and also had ceased to exist at the upper part of the dorsal region.

To sum up—we see in this case an arthropathy of the left shoulder supervene, without the occurrence of any discernible external cause, during the course of a well-marked locomotor ataxy. At the autopsy there is found, in addition to the fascicular scleroma of the posterior columns, a lesion seated in the cervical region, and in the left half of the grey substance: that is to say, at a point of the spinal marrow which we may suppose to be the place of origin of the nerve tubes distributed to the affected joint. Most certainly such a conjuncture of circumstances is not fortuitous. But, it may be asked if the alteration of the left anterior cornu—revealed by the necroscopic examination—was not a result of the functional inertness to which the corresponding limb had been condemned for several months? This hypothesis is not admissible: for, on the one hand, we know that in this patient the motion of the left shoulder, although much impeded, was never completely abolished; and, on the other hand, the lesion of the grey substance in this case differed essentially from that which follows upon the amputation of, or upon section of the nerves which supply, a limb. We are thus led to believe that the spinal lesion here was primary, and that perhaps it determined the development of the articular affection by a mechanism analogous to that which we have referred to in speaking of the trophic lesions of the muscles in progressive muscular atrophy, and in infantile paralysis. We are not, however, authorized to form a definite conclusion here, so long as it has not been established by repeated observation that the alteration of the anterior cornua of the grey substance is an invariable phenomenon in the arthropathy of ataxics.

Here ends the paper from the *Archives*. We subjoin the following clinical account of a similar case, which we find in St. George's Hospital Reports.

"*Remarks on a Case of Locomotor Ataxy with Hydrarthrosis.*—This case I was fortunately able to show to M. Charcot when he was in Leeds. Mrs. F. had been long under me with the group of symptoms called locomotor ataxy very well marked. Some months ago she noticed her right knee beginning to swell; the swelling was quite painless. Her right knee now presents the form of joint-mischief noticed by Charcot, Ball, and others, to a prominent degree. I had intended to have published a woodcut of the knee; but it is so exactly like the woodcut published by Ball, that I forbear.

"In April, 1869, the right knee measured over the patella 15 inches, and 15½ inches about one inch above the patella. The knee-joint is evidently much distended by effusion into its cavity. The swelling is more marked on the inner side of the knee, and extends farther up the thigh than that on the outer aspect of the joint. There is also some slight swelling along the anterior edge of the tibia, just below the patella, and on either side of the ligamentum patellæ. On pressure over the patella some creaking is detected.

"*History.*—There was no swelling of the knee until last April. For a time the patient thinks it varied in size;' but "now it is always the same." There is no pain in it, and the woman does not feel her right knee to be any weaker than the left. The knee is never hot, and has not been so at any time since the swelling showed itself. The patient has not received any injury to the knee of which she is aware. She can extend the leg on the thigh perfectly well; but the distention of the synovial sac will not allow of the knee being completely flexed. The left knee and other joints are normal.

"I have to thank Mr. Bradley for kind assistance in taking measurements of the joint. The size of the knee has been remarkably reduced by pressure. T. C. Allbutt, M.D."

WELL-VENTILATED SCHOOL-HOUSES. *Mr. Editor,*—Many of your readers were interested in the description, by Dr. Derby, of a well-ventilated school-house in Salem. It is possible that the letter gives more credit, in connection with the subject, to Gen. Morin, than properly belongs to him. At any rate, the following facts may be of interest:—

1. In March, 1853, a resolution of the Legislature of Massachusetts directed the Board of Education to investigate the subject of ventilation, and it was done by Mr. Daniel Leach, the agent of the Board. You will find in the report of the Secretary of the Board of Education to the Legislature, in January, 1854, precisely the same plan for ventilation, and its application to school-houses, fully described, with diagrams.
2. The same thing was patented in England about three years after that date.
3. Mr. Leach, as Superintendent of Public Schools in the city of Providence, has since introduced the same plan of ventilation, and there are now in that city four school-houses, some of them in use for several years, and two more now building, with precisely the same plan of ventilation carried out in detail.
4. The city of Oswego, N. Y., has recently built a new school-house ventilated in the same way, and they are claiming the glory of the discovery there. Yours, V.

[In 1851 or 1852, Dr. Reid, of London, described to us the plan in question, as having been adopted by him in the successful ventilation of certain hospitals and palaces. Gen. Morin is, however, alluded to only as giving the weight of his advocacy in favor of this method of ventilation, not (*yet*) as its inventor.—Ed.]

Medical Miscellany.

Mal-treatment of Lunatics. Something said on the other Side.—The fact that two of the attendants of the Lancaster Lunatic Asylum have been convicted, and sentenced to seven years' penal servitude for maltreating a lunatic named Wilson, who died in consequence of the injuries they inflicted, will, it is to be hoped, prove a check upon the reckless abuse of force which many [?] recent cases prove to be too common in our lunatic asylums. The evidence on which the jury founded their verdict was, it is true, in part that of a lunatic patient, who deposed to having seen the deceased kicked on the chest and stomach by one of the prisoners, "who struck him with his knees, and jerked his right knee into different parts of his side." But the damning proof was given by the *post-mortem* examination, which showed fracture of six ribs on one side and of three on the other. The Medical officer of the Asylum, indeed, thought that the injuries might be accounted for by a fall on the frame of a crib on which, in a single-bedded room, the deceased slept. But it would be very difficult to suppose that such a fall would break ribs on both sides of the body. Moreover there was no evidence that any patient had ever before broken a bone in the manner suggested. Indeed, Dr. Russell, who had made the *post-mortem* examination and had seen 5000 cases in the Asylum, said he could not recollect a single case of a patient getting a broken bone in a single-bedded room. We apprehend that there can be no reasonable doubt that the jury returned a correct verdict, and that the sentence is a just one. We are glad that this case did not follow the same course as that of Nistri, in which it will be recollected similar injuries were inflicted, but by whom or how there was no satisfactory evidence. The only remedy for these occurrences is the better education and training for their business of lunatic attendants, and more vigilance on the part of Medical officers and superintendents of asylums.—*Medical Times and Gazette.*

Boston Dispensary.—The following are the statistics of this institution for the six months ending March 31st:—The number of new patients at the Central Office is 6,862, of which 4,790 are medical cases, and 2,072 surgical; the number in the Districts is 4,355, making an aggregate of 11,217.

The number of prescriptions put up at the Central Office during the six months is 11,217. Number of patients since October, 1796, is 387,519. Number of patients since July, 1856, when the Central Office was opened, 268,617. Number of prescriptions since July, 1856, 574,316. Number of cases of midwifery, attended by District physician during the six months, is 82.

Samuel A. Green, M.D., *Sup't.*

According to the *Athenæum*, there is no lecturer on Dentistry at either of the Medical colleges or schools in France; but M. Préterre and others are endeavoring to get the defect remedied. —*Medical Times and Gazette.*

Errata.—In our issue for March 31, page 235, 1st column, 3d line from bottom, and 2d column, 7th line from bottom, for "Mervin" read *Meryon*. On same page, 2d column, 11th line from top, and 3d line from bottom, for "Jacound" read *Jaccoud*. Page 241, 1st column, 34th line, for "has usually" read *have usually.*

To Correspondents.—Communications accepted:—Criminal Abortion—Aphasia—Letter from Leipsic—Simulated Pregnancy—Electricity in its relations to Practical Medicine; a Review—Remarks at a Meeting of the Councillors of the Massachusetts Medical Society—Surgical Lessons of the late War—Letter from Bonn—Ovariotomy—Climate of Madeira.

Dr. O'G.'s favor, with enclosure, received.

Books and Pamphlets Received.—The Preventive Obstacle, or Conjugal Onanism. The Dangers and Inconveniences to the Individual, to the Family, and to Society, of Frauds in the Accomplishment of the Generative Functions. By L. F. E. Bergeret. Translated by P. De Marmon, M.D., New York.—Valedictory Address to the Graduating Class of Jefferson Medical College, at the 45th Annual Commencement, March 12th, 1870. By J. Aitken Meigs, M.D., Prof. of the Institutes of Medicine, &c. Philadelphia. Pp. 30.—Sanitary Legislation in New Orleans. By S. M. Bemiss, M.D., Prof. of Theory and Practice of Medicine in the University of Louisiana. Pp. 34.—Seventeeth Annual Report of the Pennsylvania Training School for Feeble-minded Children. Media, Delaware Co. Pp. 20.—Report of the State of the New York Hospital and Bloomingdale Asylum, for the year 1869. Pp. 36.—Annual Report of the Board of Health, to the General Assembly of Louisiana, Dec. 31, 1859. Pp. 48.—Population: Its Law of Increase. By Nathan Allen, M.D, Lowell, Mass. Read at the Meeting of the Western Social Association, in Chicago, November 12, 1868. Pp. 32.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending April 2, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases		
		Consumption.	Pneumonia.	Scar. Fev.
Boston	110	22	13	7
Charlestown .	9	0	1	0
Worcester . .	15	3	4	0
Lowell	16	4	3	1
Milford	5	1	0	1
Cambridge . .	13	3	1	0
Salem	7	3	0	1
Lawrence	6	1	0	1
Springfield . .	11	1	1	1
Lynn	10	1	3	0
Pittsfield	5	1	0	1
Taunton . . .	4	2	0	0
Newburyport .	6	3	1	0
Somerville . .	2	1	0	0
Fall River . .	8	3	1	1
Haverhill . . .	1	1	0	0
	228	50	28	14

George Derby M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending April 2d, 110. Males, 57—Females, 53.—Abscess, 1—accident, 1—apoplexy, 1—disease of the brain, 2—bronchitis, 6—cancer, 2—cholera infantum, 4—consumption, 22—convulsions, 1—croup, 3—debility, 4—diarrhœa, 1—dropsy, 1—dropsy of the brain, 2—drowned, 1—erysipelas, 1—scarlet fever, 7—typhoid fever, 1—gangrene, 1—gastritis, 1—disease of the heart, 1—disease of the kidneys, 3—laryngitis, 1—disease of the liver, 1—congestion of the lungs, 4—inflammation of the lungs, 9—marasmus, 8—measles, 1—old age, 3—paralysis, 3—premature birth, 1—puerperal disease, 1—scrofula, 1—suicide, 1—teething, 1—unknown, 7—whooping cough, 1.

Under 5 years of age, 48—between 5 and 20 years, 11—between 20 and 40 years, 24—between 40 and 60 years, 8—above 60 years, 19. Born in the United States, 82—Ireland, 21—other places, 7.

THE

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Original Communications.

TRAUMATIC INJURIES OF THE MEMBRANA TYMPANI, WITH CASES.

Read before the Society for Medical Observation, by Henry L. Shaw, M.D., of Boston, Surgeon to the Massachusetts Charitable Eye and Ear Infirmary.

In the examination of the external auditory passage by the old method with direct light, great difficulty is usually experienced in thoroughly illuminating the bottom of the canal. Even if successful in this, we are met by another difficulty in obtaining a satisfactory view of the parts; because the eye of the observer (to avoid obstructing the light with the head) is placed so far from the part to be examined as to give but an indistinct view. For these reasons perforations of the membranæ tympani were very probably seen in comparatively few cases. The surgeon's diagnosis was generally based on the ability of the patient to force air through the perforation by the Valsalvian method, or by the introduction of liquids into the external meatus, which, in case of perforation, it was believed would pass through the opening into the throat. The accomplishment of either of the above results is of course positive proof of perforation. But we cannot infer from their failure that perforation does not exist. For any obstruction, whether in the eustachian tubes or tympanic cavity, might render such results impossible. Fortunately, we are no longer dependent on such uncertain evidence. For by the aid of the new method of examination with the mirror and reflected light, the membrana tympani can almost invariably be brought fairly to view. The facility and thoroughness with which such examinations can be made have already had a beneficial effect on the therapeutics of aural disease.

Traumatic injuries of the membrana tympani may be caused by direct or indirect violence. Under this head it is usual also to describe those cases of rupture of the membrane arising from concussions of the air. Wounds from direct violence are the most common. Those from indirect violence are, however, by no means infrequent. The drum possesses considerable elasticity, and its anatomical structure is such as to admit of its being perforated with sharp or pointed instruments, with little or no contusion of the edges of the wound. In this respect it very much resembles the cornea, which, as is well known, is often punctured with an instrument of considerable size, without leaving a trace of the wound. Blunt or rough instruments necessarily produce more or less contusion. The danger to be apprehended from perforation is, however, not so much the injury to the membrane itself, which is often of trivial consequence, as the lesions of the deeper seated parts, or the complications which are liable to ensue from undue inflammation of the tympanic cavity.

The curve of the external auditory passage, and the bony encasement of the temporal bone, would seem to afford adequate protection to the membrana tympani from external violence. But such is not the case, the injury of this membrane being not of infrequent occurrence. A large number of these cases, however, are due to the carelessness of patients themselves, who introduce all kinds of substances into the passage as ear picks. Not a small number are caused by persons suddenly falling or turning the head with considerable force against twigs, straws, &c. Violent concussions of the air, as the sudden reports of artillery, may cause rupture of this membrane, although it has been doubted. Most of the works on aural surgery give such cases, and Roosa, in his translation of Tröltsch, mentions a case of his own, which was caused by the explosion of a pistol. Rupture is said also to be caused by whooping cough, and might be readily produced by blows on the side of the head, as in boxing the ears. It is considered a diagnostic sign of special significance in supposed fracture of the base of the skull. Of itself, however, this symptom can hardly be characteristic of this fracture, even when accompanied with a discharge of blood from the meatus. For this sometimes takes place in simple perforation, or rupture of the membrane. It is usually, however, but slight; yet the same violence which produced the lesion, might cause hæmorrhage to a very considerable degree. The author is familiar with one case of the kind, where too much importance was given to this symptom, and an unfavorable prognosis was given.

The particular part of the membrana tympani most liable to traumatic perforation is of considerable interest. In the case of wounds from indirect violence, there seems to be no point of election, the injury being liable to take place at any part of the membrane. The same is true of ruptures from concussions, although perhaps they most frequently occur in the vicinity of the handle of the malleus. In wounds from direct violence, however, one part of the drum is very rarely punctured, viz., that part against which the handle of the malleus rests. The author has met with but comparatively few cases either among those recorded, or in his own practice, of injuries of the membrane at this point. There have been instances where, as in one of the cases cited herewith, the instrument was of such extreme size as to render the wounding of the drum impossible, without including the point above alluded to. The ossicula auditus possess considerable elasticity. This may be seen by pressure over the handle of the malleus with the point of a probe, and although it is comparatively slight, it would yet seem sufficient in many instances to divert the force of the violence. In a report of several cases of traumatic perforation made by the author in the Boston Medical and Surgical Journal, Vol. ii., No. 17, the immunity from traumatic perforation at this point was attributed to the shape of the drum, by which greater resistance was afforded the membrane at this place, thus diverting the force of the blow to the other parts of the drum. Pollitzer, when speaking of the location of perforations from disease, in accounting for its non-liability at this point says, " The reason of this is to be found in the fact that the elastic elements of the substantia propria are accumulated to a much greater extent at the last-mentioned places, and consequently a greater resistance to pressure and erosion is offered here than at other portions of the membrane."

The shape and size of perforations are as variable as the instruments with which they are effected; sharp and pointed instruments producing wounds with well defined edges, which frequently remain in contact and with but little or no loss of substance. Sometimes the loss of substance is so very slight that the wounds are detected with great difficulty, and can only be seen by inflation of the tympanum, when if there is any fluid in the cavity it will ooze from the wound, or if not, the edges will be separated, and thus be brought more clearly to view. The perforation may, however, be so small as to escape detection, even on the most careful inspection. A prominent member of our profession has a perforation of the membranæ tympani, which, on repeated examinations, has not been discovered. Yet on practising the Valsalvian method he is able to produce an audible whistle in both ears. The ears are otherwise normal, the hearing is acute, and he has no knowledge of ever having had trouble in them.

The ruptures produced by concussions are generally in the form of slits, and are described by authors as being always near and parallel to the handle of the malleus. Wounds produced by the violent pressure of foreign bodies against the membrane (these are sometimes made during the process of removal) are apt to be contused and to be followed by loss of substance from ulceration. The injury in this latter class of cases is not usually confined to the membrane itself, but is generally attended with injury of the ossicula and abrasion of the tympanum, thus leading to serious trouble of this cavity.

The amount of deafness in perforation is not in proportion to the loss of substance. This is well shown in one of the cases hereafter mentioned, where fully one-third of the substance of the drum was gone, and yet the hearing was natural, the patient being able to hear the watch at the normal distance, conversational power being equally good. The explanation given by Pollitzer is undoubtedly the true one. He says: " It is the changes at the fenestræ, especially, that regulate the degree of impairment of function. If the mobility of the stapes in the fenestra ovalis is not materially interfered with, and the covering of the fenestra rotunda not much thickened, the waves of sound, passing by the membrana tympani, the malleus, and incus, will strike directly upon the base of the stapes, through the perforation, and so still reach the labyrinth in considerable number."

The rapidity with which wounds of the membrana tympani heal is surprising. This is not only true of simple punctured wounds, but of those involving much of the substance of the membrane. It is not an unusual occurrence for them, even when of large size, to heal in two or three days, and without leaving any impairment of hearing. The recuperative power of the drum is seen after paracentesis of that membrane. One of the great obstacles to the success of this operation has been the great difficulty, and oftentimes the impossibility, of keeping patent the opening. Cases are reported by older authors where the operation has been performed many times, in one instance upwards of thirty, and with only a short interval between them, but without success. For this reason the operation has fallen into disuse, although recently revived with better hopes of success from the aid of mechanical appliance.

The healing of perforations is sometimes, although not commonly, affected by direct union. This of course only occurs in clean cuts or ruptures unattended with loss of substance. In such cases, while healing, we may not be able to discover anything unusual, except perhaps a slight determination of blood to the part, with a little dulness around the cicatrizing portion.

Healing by first intention is much more common, and like the preceding method, does not usually result in serious loss of hearing. With this method of healing there is generally for a few days after the accident swelling and increased vascularity of the superficial layer of the drum. This is, however, of short duration, and is hardly noticeable on the approach of the healing process. In some instances this favorable change does not take place, but a high degree of inflammation follows, and gradually affects all of the layers of the membrane. In an early examination we can detect the separate vessels. As the inflammation increases, however, they are no longer discernible, and the membrane becomes uniformly red, presenting oftentimes an appearance much like pannus of the cornea. The absence of discharge must be regarded as a favorable sign, as indicating the tendency of the wound to heal without the intervention of suppuration. A slight moisture of the parts does not seem to affect injuriously or retard the healing. When the discharge is considerable it is usually muco-purulent, and comes mostly from the tympanic cavity, the mucous lining of which is diseased from the extension of the inflammation from the membrane. The pain attending the wounding of the drum is sometimes very severe at the time, and not infrequently accompanied with syncope. This acute pain generally lasts but a short time, and is followed by an interval of comparative ease, but on the approach of the inflammation it again becomes more or less severe. It is generally worse at night, and is aggravated by the horizontal posture. The most favorable cases are attended by tinnitus and throbbing, which are sometimes so violent as to prevent sleep. It is not uncommon for persons to be entirely unfitted for business in consequence of these symptoms, even when free from pain. They subside ordinarily as the inflammation abates, but may continue for a long time after the healing of the perforation, or are easily induced by unusual exertion.

The impairment of hearing immediately after simple perforation is usually very slight. As the inflammation is established, however, the hearing power gradually diminishes, and when it is at its height the patient may not be able to hear the watch when pressed against the ear. This degree of deafness is generally temporary, and gradually diminishes on the decline of the inflammation. The sound of the watch may be drowned by the throbbing and tinnitus, and the detection of the correct hearing point thus rendered very difficult. We are sometimes surprised to find cases that have apparently healed, return to their former condition. In such instances the union has been effected before the discharge of the cavity has ceased. This, on account of its quantity or its consistency not being able to find exit through the eustachian tubes, readily breaks through the freshly united membrane.

The appearance of the cicatrices left after perforation, depends upon the period which has elapsed since healing. When examined early they are usually seen as dull spots, more opaque than the surrounding membrane. If the perforation was of large size, by inflation of the tympanum they can sometimes be seen to bulge outward. Sometimes the cicatrices are of a dense white color at the beginning, and continue so. But this is not usually the case. They are more apt to become less marked, until finally they become of the same pearly grey as the rest of the membrane, and their detection is rendered difficult or even impossible. In other instances they undergo calcareous degeneration. This latter condition is by no means rare, and is frequently found in the membrane when otherwise normal.

In the treatment of traumatic perforations of the membrana tympani the expectant method will be found most valuable. In the greater proportion of cases where the injury is confined to the membrane, the healing is effected with but little or even no treatment. Local applications, when indicated, should be of the mildest kind. With us it is questionable whether powerful remedies applied to the edges of the wound do not usually do much harm.

At the first examination it is well to illuminate the ear thoroughly, since foreign matter may be lodged in the wound, or in the tympanic cavity. For the removal of foreign substances the use of instruments will seldom if ever be necessary. The syringe with tepid water is almost invariably sufficient for their dislodgement. If the wound is found clear, injections of tepid water should be dispensed with. These cases may heal by direct union, and such applications may prevent this desired result.

The relief which we are able to give to the throbbing and tinnitus is usually slight. As the inflammation declines they gradually diminish, but are liable to be made worse by friends in their anxiety, who make use of all sorts of irritating remedies. A favorite application is laudanum, which is put into the meatus in its pure state. The liberal use of leeches in front of the meatus will be found the most efficient remedy for the pain. The application of moist or dry heat to the external ear will afford temporary comfort, and may be made in the form of fomentations, warm cotton, &c. In many cases, however, the use of all external remedies is fruitless, and we are obliged to have recourse to opiates, especially at night.

If the case becomes complicated with more than slight sympathetic inflammation of the tympanum, there will usually be considerable discharge from that cavity. In such cases the wound is its principal source of exit, and the healing is thereby protracted. This may continue for a long time and gradually subside, or finally end in a chronic purulent discharge from the middle ear. This result is almost certain to be followed by serious impairment of the hearing. When taken early this condition can often be prevented. The important point to be observed is cleanliness, which is best secured by frequent injections of tepid water. For this purpose the use of the syringe is demanded several times daily, care being taken not to use too much force, or to continue its use after the healing process is fully established, because by too great force we may produce irritation, and by the protracted use of the syringe the cicatrized portions may be broken up. By the use of the douche of Dr. Clark, the danger is in a great measure avoided, and it is, on the whole, the safest instrument for patients to use themselves. It is well, however, for the patient to be seen daily, since there will often be found a muco-purulent discharge, which requires the aid of the surgeon to remove. If the inflammation is of a low form, the use of very mild astringents may often be substituted for tepid injections with advantage. Among the most useful are alum and zinc. Their use tends to arrest the discharge, and promote the healing of the perforated membrane. In these cases appropriate constitutional treatment is of great value, iron and quinine being especially indicated.

In connection with tepid injections the cautious use of the Valsalvian method of inflating the tympanum will often be found of service in forcing the discharge through the wounded membrane. To render this most thorough, the head of the patient should be turned toward the affected side. The use of this method will sometimes be found impossible from some obstruction of the eustachian tubes. It might also rupture a freshly united wound, but as the wound is not generally united when there is much discharge from the tympanum, this method may safely be advised when the patient is seen daily. It, however, would hardly be necessary where the discharge is slight. Any violent expiratory efforts, as the use of the handkerchief, sneezing, &c., may cause the opening to break forth anew.

The ear at such times is abnormally sensitive to sound. The sensitiveness may be relieved somewhat by the use of cotton placed in the concha, or loosely laid in the meatus. The use of cotton for protecting the ear from the air is hardly necessary, except in cases where the patient is subject to unusual exposure.

Aug. 12th, 1870, C. S., an intelligent German woman, while stooping to prune a grape vine, felt what she believed to be a twig enter the external auditory meatus of the left ear. The perforation was accompanied with intense pain, which lasted but a short time. The ear continued to ache, however, yet the pain was not severe enough to prevent her sleeping well that night. A slight defect of hearing was noticed immediately after the accident, and also numbness and tenderness of the whole of the scalp of the opposite side of the head. The tenderness was so great that the slightest touch was attended with severe pain. The second day the ear was free from pain; at night it came on again, keeping her from sleep a part of the time. There was very slight discharge noticed on introducing the finger into the meatus, but not enough to run from the passage. There was throbbing and tinnitus.

At her first visit to the Infirmary, two days after the accident, the hearing point with the watch was 12 in. (the normal point being about 36 in.). Conversational hearing power was good. Just below the malleus, and somewhat posteriorly, was an oval perforation with well-defined edges; its longest measurement was about three lines, the shortest about one-half the size. At the upper part of the wound, adhering quite firmly to the edge, was a dark mass, which at first was supposed to be a foreign body, but which proved to be a hardened clot of blood. Air passed freely through the opening in the membrane, with an audible whistle on practising the Valsalvian method. The upper part of the membrane was of a decided pink color; the remaining portion was nearly normal in color, but a little duller than natural. The mucous membrane of the tympanic cavity, a good view of which was afforded through the perforation of the membrane, was heightened in color and slightly swollen. A small quantity of discharge was noticed at the bottom of the passage. The numbness and tenderness of the scalp of the opposite side of the head still continued, but were much less severe than at first. An effort was made to remove the clot from the edge of the wound with the syringe and tepid water. But little force was used. This not being successful, the clot was taken away with forceps. She was ordered to syringe the ear with tepid water, if the discharge was sufficient to run from the meatus. If the pain was severe, one leech to be applied in front of the meatus. The patient was told that the hearing would probably be worse on the following day.

Aug. 13th.—Hearing point 4 in. Pain last night, but not enough to call for leech. Has had violent throbbing and tinnitus. The inflammation is no longer confined to the upper part of the drum, but has extended to the whole membrane; which is much swollen. The position of the malleus is made out with difficulty. She has used tepid injections several times. Ordered tr. of iodine to be frequently painted over the mastoid process.

Aug. 17th.—Has had a little pain each night since last record. Within a day or two the discharge has increased, being sufficient to stain the pillow at night. There is now a little muco-purulent matter at the bottom of the passage. The drum and the mucous membrane of the tympanic cavity look paler; the edges of the perforation are irregular, and appear as if ulcerating. After cleansing the ear with the syringe and the use of the Valsalvian method, the hearing point was 2½ in. Ordered one leech front of external meatus—injections of tepid water continued, to be followed by the instillation of a solution of sulphate of zinc, 2 grs. to 1 ounce of water.

Aug. 24th.—Quite comfortable for several days. The discharge has been gradually diminishing. The numbness and tenderness of scalp have nearly gone. The tinnitus is felt occasionally, and the throbbing is noticed at night only. Air does not pass through the membrane on practising the Valsalvian method. She says her voice sounds more natural. Hearing point, contact. The perforation has healed entirely. The cicatrix looks much smaller than the original perforation; is whiter and duller than the rest of the membrane.

Oct. 27th.—Has been absent from the city several weeks; had no trouble except occasional tinnitus at night. The hearing has been gradually improving, and is now considered as good as ever. The point with the watch is fully up to the normal standard, as is the conversational power. On examination of the ear, the cicatrix is seen as a very small, irregularly defined white spot, about one fourth the size of the perforation.

Aug. 4th, 1868.—P. M., while at play, put a stone into the external meatus of the right ear. It had given him no trouble until it was discovered by the mother, a few days afterwards. When first seen by her, it was said to have been but a short distance in the meatus, and she made several unsuccessful attempts to remove it, from which time the ear has given him considerable pain. Failing to dislodge it herself, the aid of medical men was sought, and he was finally brought to the Infirmary.

On examination of the auditory passage, it was found extremely tender, inflamed and swollen. The bottom was filled with blood, after the removal of which the foreign body was seen, nearly filling the bottom of the passage. From its position, it was judged to be lodged partly in the tympanic cavity. An attempt to effect its removal with the syringe was made, but it was attended with so much pain that ether was given; after which it was without much difficulty syringed out from the ear. The removal was followed by considerable hæmorrhage, which rendered a thorough examination of the bottom of the meatus at this time impossible. The patient was ordered injections of warm water, and, if much pain, one leech in front of external meatus.

Aug. 5th.—Considerable pain last night, but leech was not applied. Point with watch—when pressed against the ear. There is some sanguineous discharge at the bottom of the passage. At the anterior and posterior part of the membrana tympani is a perforation, with rough edges, about two lines in diameter. The remaining drum is inflamed and swollen. The prominence of the malleus can hardly be made out, and the whole membrane looks concave, as if pushed inward. Was ordered a leech in front of the meatus; injections of warm water continued, and poppy fomentations, if painful.

Aug. 9th.—Ear feels sore all the time. First few nights considerable pain, with tinnitus and throbbing, and within a day or two a muco-purulent discharge. Ordered quinine.

Aug. 12th.—No pain; discharge has been constant, sometimes runs from meatus. Point ½ in., not improved by inflation. The perforation seems to have increased a little. Ordered tr. iodine over mastoid process.

Aug. 18th.—Point the same. Discharge more of a purulent character, and comes from the tympanum.

Aug. 24th.—Discharge slightly increased. Point, contact. The perforation involves about one third of the membrane. The prominence of the malleus is more easily distinguished. The drum looks dull and white, as in case of chronic discharge from middle ear. Air passes freely through the perforated membrane. Was ordered to inflate the ear before syringing. Solution of sulphate of zinc as substitute for warm water.

Sept. 1st.—Discharge less. Point ¼ in. From this time the patient failed to return, but from the appearances at the last few visits the case probably terminated in a chronic purulent discharge of the middle ear.

July 9th, 1867.—A. T., æt. 55. In alighting from a car while in motion, was struck on the side of the head and thrown with violence to the ground. The blow caused concussion, but he was able to walk to his home, unaided, in a short time. Deafness and tinnitus were noticed immediately on recovering consciousness; there was a slight discharge of blood from the meatus. The external ear was much bruised.

July 19th.—For two or three days after accident had considerable pain at night; passed last night without pain. Complains now most of the reverberations of sound and tinnitus. Point with watch, contact. A rupture of the membrana tympani is seen, extending very nearly the whole length of handle of malleus, and for some distance beyond. The edges are a little red and raised, but do not admit of the passage of air. The whole drum looks a little dull. Was not advised treatment.

July 25th.—Point, contact. No trouble except tinnitus. The seat of the rupture is made out with difficulty; is seen only as a white streak. Ordered tr. iodine over mastoid process.

Aug. 15th.—Thinks hearing improved. Tinnitus less loud; ear feels more natural. Point, ¼ in.

Sept. 9th.—As before. Seen several times afterwards, but continued the same. The great defect of the hearing in this case, and its long continuance, can hardly be attributed to the rupture of the membrana tympani alone, but is probably due to the injury of the ossicula at the time of the accident.

ANALGESIA IN SECONDARY SYPHILIS.

Translated by Edward Wigglesworth, M.D., Paris.

[Fournier, the well-known pupil and successor of Ricord, was the first to call attention to this symptom, in a lecture recently delivered by him at the Lourcine Hospital, in Paris. By his kind permission, I translate a few extracts from that lecture, since, as this condition has never yet been described in print, it may have escaped the notice of some members of the medical profession. It consists in a diminution or complete abolition of the general cutaneous sensibility to pain, thus forming a marked contrast to the more usual painful phenomena of the disease.]

Pathological anatomy has induced me, during the last few years, to examine the condition of the general sensibility in syphilitic women. Seeing that many poisons exercised an influence upon this sensibility, in different degrees and under various modes of expression, it occurred to me that the virus of syphilis might also determine similar phenomena. I established, therefore, a scrupulously exact investigation upon this point, and was astonished at finding that, in fact, in a very large number of patients the sensibility was affected in a marked degree. I say astonished, inasmuch as a phenomenon so marked and so susceptible of proof as this did not at all seem to me of a nature to have escaped thus far the attention of observers. Encouraged by the first results obtained I continued my investigations, and to-day I am able to state with certainty that secondary syphilis causes, as a frequent occurrence in women, various alterations of the general sensibility. I have observed more than one hundred such cases during the last three years.

These alterations differ in their forms, affecting the sensibility in different ways according to its various modes of expression. Sometimes, for instance, the perception of pain is alone wanting. This is the true analgesia. Sometimes the perception of contact fails as well, the patients being simultaneously analgesic and anæsthetic. Sometimes also, though more rarely, the perception of changes of temperature is absent.

Simple isolated analgesia, without loss of the perception of contact or of that of temperature, is the most habitual form under which we notice these disorders. Here, for example, is such a case. This young girl contracted syphilis three to four months ago. She presents to-day numerous specific manifestations—a papular eruption, crusts in the hair, swelling of the cervical glands, some alopecia, arthralgic pains, headache by night, &c. I thrust a pin, as you see, through the skin in all parts of the body. She gives no sign of suffering. There is universal and complete insensibility to pain. But though she does not feel the puncture, nor suffer in any way, she perceives perfectly the contact of the foreign body. She perceives, to use her own words, "that something pointed has touched her," and she designates the spot also with exactitude. She perceives in the same way the contact of my finger, however lightly I apply it. She is equally susceptible to any variation of temperature. In a word, she is analgesic, and simply analgesic. This condition, however, is recent, not existing a few weeks since, at the time of her entrance into the hospital, as I have assured myself at different periods. She has become analgesic in consequence of the syphilis, and sooner or later will completely recover her normal sensibility, the analgesia growing less and disappearing as the other manifestations of the disease are modified either by time or by specific treatment.

The second form is less frequent—analgesia combined with anæsthesia. Here is another woman, sick for several months, presenting at present numerous manifestations of syphilis. Like the former case, she complains of no pain when I insert this pin through her skin; but unlike the former case she cannot tell, with her eyes bandaged, whether I touch her with my finger or not. I can produce the sensation of contact only by strong pressure. And here let me state that, though analgesia is frequently met without anæsthesia, the reverse does not take place. It seems that anæsthesia cannot exist alone. Thus far, at least, I have never met with a single patient who was simply anæsthetic without being insensible to pain.

Third variety. I show you now a third woman, who is not only analgesic, but has moreover lost the sense of temperature. I place on the dorsal surface of her forearm two cups, one filled with hot water, the other with cold. For her their temperatures are the same; she feels neither the heat of the one nor the cold of the other. I light a candle and apply the flame to her fingers, and it is only after some seconds that she withdraws them. A few days since she burned herself severely with a flat-iron, not being able to appreciate the temperature, and another time, wishing to repeat the experiment with the candle, she burned herself so as to produce a deep slough.

As I have said, simple analgesia is the most common of these conditions. We find sometimes merely a slight diminution of sensibility to pain, sometimes its complete and absolute abolition, or again any degree between these two extremes. So as to location. The analgesia may be universal, or partial and confined to certain regions. In this latter case we find it restricted almost invariably to the extremities of the limbs—*i. e.* to the hands, to the lower half of the legs, the ankles and feet. At times, even this partial analgesia is still more limited in extent, and, in fact, localized in a special region. This region is the back of the hand, the dorsal surface of the metacarpus. In a very large number of cases I have noticed this exactly defined limitation, the normal sensibility being everywhere else intact. In fact, the contrast is quite striking between the intact sensibility of the palmar surface of the hand and the analgesia of its dorsal surface. This analgesia may extend also upon the posterior surface of the fingers. This singular localization of syphilitic analgesia upon the dorsal surface of the metacarpus, or also of the fingers, is certainly a most interesting phenomenon. It is also one of the most common, for we observe it now almost daily in the hospital wards. Moreover, it is in this region that we must seek for the first appearance of analgesia, for it is always present here if existing elsewhere; and it exists here very often alone, being absent in every other part of the body. So, also, when the analgesia is more extended or general even, it is in this region that it attains its maximum intensity, and may even be absolute and complete here while existing but slightly elsewhere. Still more, when the extensive or general analgesia disappears, it is in this region that it survives the longest, existing even after its complete disappearance everywhere else. There is, then, in this dorso-metacarpal localization of the analgesia something special, belonging to the genius of the malady and well worthy of fixing the attention.

Syphilitic analgesia is generally superficial and exclusively cutaneous, for an irritant is perceived when carried into the cellular tissue and the subcutaneous nerves. Thus, most analgesic patients are sensible to pinching, though I have observed some completely insensible to pinching, twisting or wrenching. It is also, as a rule, symmetrical, though I have met with some remarkable exceptions, as *e. g.* an analgesia of the dorsal surface of the left hand and of its ring finger, with perfect sensibility everywhere else.

These disturbances of the sensibility manifest themselves preferably, according to my experience, during the first months of the secondary period, coincident generally with other manifestations of the disease. Their duration is nearly always long. It is rare when they do not last at least several weeks. More often they persist for two, three, or four months, and some very rebellious cases even longer."

You will ask, perhaps, if these disturbances of the sensibility are due really to syphilis; if they may not, perhaps, have some other origin. It is true such phenomena might be due, especially in women, to some nervous trouble, to hysteria, to chloro-anæmia, &c. In this case they would be simple coincidences, having no connection with the syphilis; simply nervous phenomena, expressions of some pathological condition, and developed merely by chance upon syphilitic patients. But no one of my patients has presented either the attributes of chlorosis, the antecedents of hysteria, or the habitual predisposition to nervous troubles. Is it not logical, then, for this reason alone to attribute them to the morbific, actual and common cause, to the influence of which these patients are subjected?

But there are other reasons also which lead me to regard them as of syphilitic origin.

1st. Their frequency; for they are, as I have said, very frequent phenomena of the secondary stage in women. Would they be equally common if simply fortuitous coincidences? Common sense forbids us to think so.

2d. A more forcible and more clinical reason, their development under conditions always identical. We see them manifest themselves in the secondary stage of syphilis, and in the first months of this stage coincident either with other syphilitic accidents of a different sort [cutaneous eruptions, mucous patches, swelling of the glands, &c.], or with other phenomena of the same nature affecting the nervous system. Making thus a part of one general whole, it would be strange indeed if they figured only under the title of foreign manifestations, whose presence was due solely to fortuitous coincidence.

3d. The evolution itself of these pathological forms. Appearing at the same time with other manifestations evidently syphilitic in their nature, they conduct themselves, so to speak, like these last, having the same duration, and fading and disappearing simultaneously with them under the same influences of time and treatment. In a word, they are the same, and undergo the same evolution. How can we then refuse to believe in their syphilitic nature, when this is undeniable to the other accidents of the pathological group of which they form a part?

And why should not syphilis occasion such disorders? Is it not a disease which, especially in women, influences to the highest degree the nervous system, and troubles its functions in a thousand different ways? Do we not see, moreover, similar phenomena produced by many other poisons, such as lead, arsenic, alcohol, &c.? Pathological anatomy bears witness in favor of the opinion we here advance, and permits us to believe that the syphilitic poison can, like other poisons, modify the sensibility. I do not hesitate therefore to consider these troubles of sensibility as syphilitic manifestations, and to attribute them, as well as other symptoms of the same class, to the influence of this singular and polymorphous diathesis.

ON THE SURGICAL LESSONS OF THE LATE WAR.

By Dr. Asterisk, A.M., M.D., LL.D.

Speculation on the great advances in Medicine and Surgery, which have been or will be made as results of the late war, and the statistics and reports derived therefrom, is now a favorite topic in medical journalism. Progress has undoubtedly been made. It seems to be established, that cerebro-spinal meningitis causes spots on the skin, and generally kills the patient; glycerine has been placed on the Army Supply Table; a new edition of the Dispensatory is out; and we are taught in the New Eclectic Magazine of June, 1869,* that a gangrenous limb may be cured by ligating its chief artery. By the aid of the microscope we have learned that the ulcers in typhoid fever are due to the removal of tissue; and the Photographic Series of the Army Medical Museum shows conclusively that, when a ball strikes a bone, it sometimes breaks it, and occasionally comminutes it, and also that it does not necessarily penetrate it. There also appears to be little doubt that in amputations of the thigh, the patient often dies in a few days; that while he survives, his heart beats faster than usual, and the injured bone is found to be red and soft, and not green and hard. It has also been discovered that if a wound be thoroughly cleansed and washed with nitric acid, buttermilk, permanganate of potassa, or bromine, it will not infrequently remain a healthy granulating surface. In a few cases pure water is used for this purpose with satisfactory results. It is my desire to call the attention of the profession to a remedy, which in my hands has proved to be of the greatest value, as the statistics which I shall offer in a future article will irrefragably prove. This preparation, of such general applicability, is the *icthyocollæ preparata Spaldingii*, a readily accessible and well-known solution. My attention was first called to its utility in the case of General Jones, of which I give the following brief history:—Second Lieutenant and Brevet Major General Jedediah H. Jones, U.S.V., aged 22 years and 3 months, having been previously of a healthy constitution, was taken suddenly ill on the morning of May 3d, 1863, as he was about to lead his command in a charge upon the enemy's lines at Chancellorsville. He complained of great pain in the abdomen, of repeated desire for micturition, of a fluttering sensation at the heart, of weakness in the legs. His countenance was pale, his pulse was 102⅞, and small and weak. I gave him six ounces of brandy, containing in solution one drachm of icthyocollæ, which immediately brought him to the sticking point. Immediately after he had taken the medicine, an aide-de-camp informed him that the attack was not to be made, and the general rode off to his quarters as well as ever.

The details of the following case have been very kindly furnished me by one of the most scientific and careful observers of the regular staff:—Private A. B., 120th Rhode Island Volunteers, aged 45 years, was admitted to hospital on June 12th, 1863, with an incised wound on the left thumb, three-eighths of an inch in length, and averaging half a line in depth. The constitutional symptoms were slight. The hæmorrhage had not been excessive. There was little shock. The pulse was almost normal. After consultation it was decided to attempt to preserve the limb. The wound being carefully cleansed, its edges were placed in apposition, and strips of linen, moistened with icthyocollæ preparata Spaldingii were carefully applied. No vessels required ligature. The arm having been placed in a splint, the patient was put to bed, and in three-quarters of an hour had so far recovered as to be able to eat a bowl of stewed oysters, and in one week was able to accept a furlough of thirty days. In the incipient stage of alopecia, this remedy, if freely applied, will rarely fail to stop the progress of the disease. In diarrhœa, its wonderful power of controlling symptoms ever elicits the admiration of those who witness its effects. In this complaint, it is to be applied with a fine camel's hair brush over and around the anus. If the case be choleraic in character, a small portion may be used as an enema. The applicability of this remedy in hæmorrhoids, varicose veins, psoas abscess, compound fracture, and aneurisms, are so obvious that it is unnecessary to dilate upon it. In penetrating wounds of the chest, it would be found a satisfactory substitute for the means of hermetically sealing, suggested by one of the most profound of modern military surgeons. I desire particularly to call the attention of the profession to the method of using this invaluable agent in one of the most annoying of all diseases that come under the observation of the military surgeon. I refer to chronic rheumatism. The patient should be swathed in bandages saturated with ichthyocollæ preparata Spaldingii, from his shoulders to his toes. They should be applied in triple layers, and very firmly, so as to prevent the motion of any joint. The chin should then be firmly attached to the chest by roller bandages, fastened around the head and passed in a figure-of-eight under the arms. The face should then be covered with compresses of at least twelve layers. The patient should then be fed on plain mush without salt, and should be permitted to receive visitors. If this plan is faithfully carried out, the patient will usually desire to rejoin his regiment in about six days, a result unattainable by any of the methods of treatment heretofore employed. In many cases in which opiates are counter-indicated, this remedy is unsurpassed as a soporific. If properly applied to the eyelids, a repetition of the remedy is rarely called for. When combined with the subnitrate of bismuth, or with minnium, or chalk, this agent furnishes one of our most desirable cosmetics. I have not employed the remedy in traumatic tetanus; but in this affection it deserves an impartial trial. In all excisions and amputations it should invariably be applied to the cut surface, to prevent purulent absorption, and as a ready hæmostatic. In brief, the outfit of a military surgeon or of a medical man in civil practice should never be considered complete without this remedy. It is to be hoped that it will soon be placed upon the Army Supply Table. Four gallons would be about a three months' supply for one hundred men. This preparation of icthyocollæ preparata Spaldingii is sold in the shops under the name of Spalding's Glue.

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* Vol. iv., No. 6, page 709.

HYDRATE OF CHLORAL.

By J. L. W.

I submit the following case without comment:—

Capt. W. R., mariner, æt. 30, was attacked, on the passage home from India, with dysenteric symptoms; not severe at first, but continuing without abatement for six months, until his arrival in Boston. Here he grew worse; and, being called to see him, I found symptoms of chronic hepatitis, as well as severe pain and tenderness in the rectum and colon, as high as the transverse part. This was much increased at the times of defæcation, the stools being scanty, very offensive, and occasionally mingled with blood (attributable, no doubt, to hæmorrhoids, from which he suffered). Paroxysms of vomiting, with severe spasms of the stomach and diaphragm, occurred every three or four days. These lasted for two or three hours, causing acute suffering and increasing prostration. Opium, even in full doses, seemed rather to aggravate than relieve the symptoms, and its consequences compelled its abandonment. The customary substitutes for this anodyne were tried, with a similar negative result, as were also the measures suggested at two consultations with physicians of this city, held at the instance of anxious relatives. Bromide of potassium twice caused such distress and vomiting that a third trial was not to be thought of. As a forlorn hope (for I distrust new remedies), I procured some hyd. chloral (made in Göttingen), took thirty grains of it in an ounce of water, and finding no bad effects from the dose, gave my patient, on the accession of the next paroxysm, as soon as I was called in, fifty (50) grains, followed in ten minutes by forty (40) more. A third dose of forty (40) grains, in fifteen minutes, relieved my patient from all sense of pain, and in a few minutes he was in a quiet sleep, the first he had known for days. At my next visit (in seven hours), he had just awakened; complained of a slight headache, which soon passed away on ventilating the room, which was excessively close, and full of a heavy odor reminding one of chloroform, and yet quite distinct from that drug. He presently asked for food, which he took with relish and retained, to my great surprise.

He had not another paroxysm of vomiting, the stomach became tolerant both of food and medicine, and the case progressed, though slowly, to convalescence.

In about five weeks he was able to go home to Maine, and I have since heard from him that he is quite well.

I refrained from reporting this somewhat remarkable case until satisfied that the improvement was not merely temporary.

I never saw more speedy and complete relief from intense suffering, excepting in complete anæsthesia.

HYDRATE OF CHLORAL IN PHRENITIS.

By a Correspondent in Virginia.—Communicated by D. F. Lincoln, M.D.

S. P., æt. about 25; bilious temperament; unmarried; suffering from phthisis pulmonalis, induced by the loss of right arm at the shoulder during the late war, and the exposure and hardships of campaigning.

Jan. 25th.—Was called to see him, and found him in violent delirium. Pulse 125; head very hot; violent pulsations of the carotids. Wild expression of countenance, with dilation of pupils; tongue heavily coated with dirty white, frothy mucus in mouth, sordes upon teeth, temperature of body not much increased, feet cool, bowels very costive, urine scanty and high colored; had used much cathartic medicine.

Since the morning of the 22d, he has been sleepless and in constant motion, rocking backwards and forwards, struggling with his attendants. It takes two men to hold him, to prevent his injuring himself or others, has talked continually since the 22d, picks the bed clothes with his hand, catches imaginary moths in the air, or on the floor, hearing and sight very acute, no appetite, drinks a spoonful of water occasionally. Morphine and other opiates produced no effect. As these opiates were given by a physician who was not present, no information respecting doses can be given.

Thirty grains hydrate of chloral were rubbed up in a little simple syrup and administered about 6 o'clock, P.M. The patient went quietly to sleep at 7 o'clock, slept five hours, awaking enough to take thirty grains more of the hydrate of chloral, prepared in the same way. Slept then seventeen hours, then for another twenty-four hours waked and slept alternately; then he awaked, with perfect consciousness, pulse 75, head cool, spontaneous movement of the bowels after about seven days' constipation.

Jan. 30th.—The patient sits up, eats light food with appetite, is cheerful and comfortable, is perfectly rational, says that he "has lost some days in some way."

Feb. 18th.—The patient succumbed to the pulmonary disease before mentioned, but remained quiet and comparatively comfortable up to the time of his death.

Movable Kidneys.—Dr. Wm. Roberts, of Manchester, has brought before the Manchester Medical Society five cases of movable kidneys. In four of them the right alone was affected. All were women who had children. One was verified by *post mortem*. Of 57 cases collected by Dr. R. 52 were in women, and the right kidney is far more frequently affected than the left. Childbearing and tight lacing were frequent causes of this affection. The valuable signs are the hard, smooth, sloping, rounded character of the swellings, and their mobility.—*N. Y. Medical Record.*

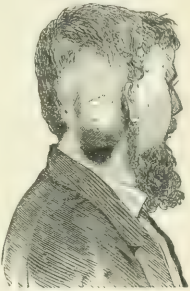
Reports of Medical Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.
CHARLES D. HOMANS, M.D., SECRETARY.

Feb. 14th.—*Cartilaginous Tumor of the Skull.*—Dr. Coolidge reported the case.

The patient, a man aged 33, had a conical tumor projecting behind the right ear, of about two years' duration, but which had grown rapidly of late. It was soft, immovable, not fluctuating, well defined, except below, where it could not be distinguished from the tissues of the neck (fig.1).

Fig. 1.



It was removed by a crucial incision, March 24th, 1869. It was too soft to be removed entire, and broke up during the operation. The bone was bare beneath it; the outer table of the skull was partially absorbed. Four inches below the growth, an incision through the indurated tissues of the neck gave vent to an ounce and a half of pus. The patient improved steadily, and left the hospital forty-four days after the operation.

About a year after, Feb. 5th, 1870, he re-appeared with a small, hard, elastic swelling at the upper end of the cicatrix, which he had first noticed five weeks before. An incision showed this to be a spherical mass projecting through the outer table of the skull. The upper half of it was removed easily. A projecting rim of bone around its upper border had to be cut away before its lower half could be pried out. The whole formed a distinct, round nodule of cartilage. There where it had lain the skull was perforated, and at the bottom of the cavity could be felt a soft tissue, supposed to be the membranes of the brain.

The patient had a good recovery from ether. In the evening he complained of headache, but had a tolerable night. There was intense headache the next day, and occasionally nausea. The mind was clear. The pulse was soft, 96. At midnight, the nurse sitting at the foot of his bed attending a patient with fractured skull in the next bed, found him dead.

The *post-mortem* examination showed a cartilaginous tumor situated behind the ear. Above the mastoid process there was a perforation through the skull, 1 inch in breadth by 1½ in length, through which the growth had protruded.

A larger part of the disease lay inside the skull, close behind the petrous portion of the temporal bone, part of which had been absorbed by its pressure. It was a hard, elastic, lobulated mass, showing, on section, the boiled-sago appearance so often seen in cartilaginous growths. The microscopic examination proved it to be enchondromatous.

This part of the tumor was 2½ inches in length and 2 inches broad. The lobes projected from an inch to an inch and a half and more inwards. The membranes of the brain lay unaffected over them. The cerebellum was crowded to one side and part of the cerebrum was pressed upward.

The inner table of the skull was absorbed to some extent around the perforation through the skull. Posteriorly to the external opening, near the lambdoid suture, and anteriorly to it, the outer table had been absorbed in spots, so that the growth within the skull and in the diploe could be seen in these openings immediately beneath the periosteum of the outer surface. This was especially the case at the point corresponding to the petrous portion, where a needle could be thrust through such an opening for an inch into the cancellated structure of that part, which was filled with small, but perfectly distinct masses of the disease.

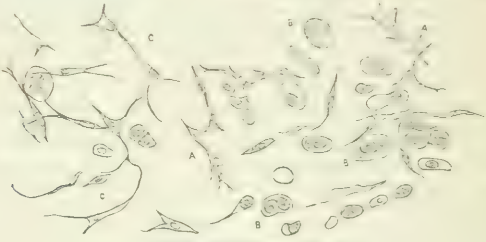
The second operation had removed a lobule of cartilage similar to those inside the skull.

The part removed at the first operation consisted of a soft mass, part of the surface of which was convoluted like a miniature brain. The surface of the fragments into which it was broken during removal had a coarsely granular appearance. Pressure with the fingers reduced the mass to a slippery pulp. After being hardened in alcohol, a careful microscopical examination was made of it. It was part of the same cartilaginous growth, but modified. There were some delicate bands of connective tissue in the cartilage. The well-known common cartilage cells, wrinkled up by the alcohol, were seen everywhere (fig. 2, B). Besides these, were other irregularly formed cells (fig. 2, A), which are not found in normal cartilage in man, but do occur in enchondromata, and are said to resemble the normal cells found in the cephalic cartilage of certain cephalopoda. Besides these, there were stellate cells (fig. 2, C), united by their prolongations, and embedded in an albuminoid inter-cellular substance resembling white-of-egg, and which made the whole mass so soft that a thin section could not be made of the tissue before it was hardened.

These anastomosing stellate cells are not uncommon in enchondromata. They may form a small portion only, or the greater part of the tumor. In the latter case, the growth becomes a soft or gelatinous enchondroma.*

In the present case, the cartilaginous tissue was mixed up with the soft mucous tissue, and though the first predominated,

FIG. 2.



A. Irregular cells of enchondroma.
B. Common cartilage cells.
C. Mucous-tissue cells.

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* Some tumors are made up entirely of this kind of soft tissue, consisting of anastomosing stellate cells embedded in a transparent mucous intercellular substance —the typical form of which is the so-called mucous tissue, as shown in a section of the umbilical cord. Virchow gave the name of myxoma to tumors formed by this tissue.

there were small places discernible under the microscope where the mucous tissue appeared alone, with no cartilage cells. The connection of these two tissues—the cartilaginous and mucous—side by side in separate masses in one tumor, is found not rarely in the so-called mixed cartilaginous tumors of the parotid.

The tumor in the present case is an enchondroma of the skull, beginning probably in the diploe, causing absorption of the bone and projecting outwardly over the mastoid process and inwardly into the cavity of the brain. Part of the external portion was a soft enchondroma.

It is probable that this part of the tumor was a mixed growth from the beginning.

In Dr. J. Mason Warren's "Surgical Observations, with Cases and Operations, 1867," is represented on the frontispiece a similar tumor as a "fungous growth" of the head, which had perforated the skull. The case occurred in the practice of Dr. J. C. Warren, who removed it in 1847. After its removal, an instrument, passed along the edge of the perforated bone, entered the cavity of the cranium. Five years after this, the patient having in the meantime married and gone to California, the tumor had partially returned. Nineteen years after the operation, the patient was still living in California. She suffered no inconvenience from the tumor. It had slowly enlarged until three years before, since when it had undergone no material change. The fungous appearance was probably due to an unusual amount of bloodvessels. The tumor was examined at the time, by Dr. H. J. Bigelow, and found to be enchondromatous.

Dr. Jackson said that cartilaginous tumors do sometimes return, and are clinically malignant. In the remarkable case of cartilaginous tumor of the scapula, shown here some time ago, the patient's sister probably had a similar tumor on the arm, and the patient's mother had a large one just above the knee.

Dr. Bethune asked if fibro-plastic tumors were considered malignant, their tendency being to return in the same place, and not elsewhere.

Dr. Jackson thought them malignant to a certain degree; he considered all tumors malignant which showed a tendency to return, and to affect distant parts. The term is very indefinite, and the microscope does not by any means always clear up the subject, though it does sometimes.

MASSACHUSETTS MEDICAL SOCIETY.

Remarks

Made at the Councillors' Meeting, February 2d, 1870; explaining, in brief, the history and the requirements of the Laws now in force relating to

Admission of Members.

The Massachusetts Medical Society was incorporated in 1781; before the establishment of the Medical School in Harvard University. Previously to its incorporation there were in the State no legalized methods of designating those who were "duly educated and properly qualified for the duties of their profession;" and "full power and authority" were granted to the Society, under penalty for refusal, to examine all applicants and give "letters testimonial," or license, to such as were found "skilled" and "fitted" for practice. The number of members of the Society was limited to *seventy*; the number of licentiates was not limited.

Twenty years later, when the Medical School in the University had got a firm footing, and its graduates having pursued and been examined in "a course of study fully equal to that prescribed by the Massachusetts Medical Society," and when the profession throughout the State, under the influences of both these institutions, had greatly improved, the Society liberally opened its doors to membership (by an Act of the Legislature, dated March 8th, 1803) to all *its licentiates* and to the *medical graduates* of the University. This Act remained in force in these respects, until modified by the Revised Statutes of the State, enacted in 1836. In one form or another it has always to the present day been recognized in the Society's By-laws, and in the practices of its examining Boards. The Society had the first legal right to grant liberty to practise medicine, and to this extent, yielded that right; or, in fact (so far as its membership was concerned), tacitly constituted the Medical School one of its Boards of examiners.

In 1837 "Berkshire Medical Institution" became independent of Williams College, with which it had been connected from its formation in 1822. In obtaining an independent Board of Directors, it sought and had the assistance of the Massachusetts Medical Society, whose councillors sent a committee to the Legislature for this purpose.

At a special meeting of Councillors, May 17th, 1837, a committee reported a By-law adding words "or Berkshire Medical Institution," which was adopted as it now stands, thereby making that Institution also one of its Boards of examiners.

At the same meeting (May 17th, 1837) the Councillors passed an ORDER, *which stands in full force to-day*, that if any licentiate or graduate of Harvard University, or of Berkshire Medical Institution, neglects to obtain admission into the Society within one year after such license or graduation (the time designated by the Statute), he shall be deemed an irregular practitioner.

In June, 1857, a communication was received from the Censors of the Suffolk District, asking for an alteration of the *Charter* and By-laws so as to require all candidates to be examined. This communication was laid upon the table.

In October following (1857) the communication was taken from the table, and referred to a committee consisting of Drs. D. H. Storer, H. C. Perkins and A. A. Gould. In February, 1858, the Committee reported amendments to By-laws, and recommended application to the Legislature for an Act to enable the Society to adopt these amendments. The same Committee was then directed to petition the Legislature for said alterations in the Charter.

May 24th, 1859, at the Annual Meeting of Councillors, the Committee reported the Act, passed March 5th, 1859, in nearly their own language, viz. :—"No person shall hereafter become a member of the Massachusetts Medical Society, except upon examination by the Censors of said Society; and any person of good moral character found to possess the qualifications prescribed by the rules and regulations of said Society, shall be admitted a fellow of said Society."

After various motions and considerable discussion, some thinking the Revised Statutes covered the whole matter, the Act was *not accepted*, 28 voting in affirmative, 29 in negative. The whole subject was then referred to a committee who, Oct. 5th, 1859, reported amendments as now in printed copy, not differing essentially from previous By-laws, except in the exclusion of those about to practise any forms of quackery.

The Amendments were accepted by the Councillors.

At an adjourned (annual) meeting of the Society (May 31st, 1860) these amendments were concurred in by the Society as

Printed in 1860.

So much for history; at present the Law and its requirements are as follows :—

By Revised Statutes of the State, enacted in 1836, Part I., Chap. xxii., Sect. 4th, the *Censors shall examine all applicants*; but, by Sect. 7th, the Censors *may* admit any person who has been educated *out* of the State, *if they are satisfied*, &c.*

It appearing that, from time to time, persons from out of the State, not having "received an education equivalent to that prescribed by the Society," though having diplomas, had applied for license or admission into the Society, the Councillors, May 30th, 1850, voted that "the censors should satisfy themselves by *examining* such applicants * * * * who without such examination should not be admitted to fellowship."

In accordance, as above stated, with the Laws of the State and the Votes of the Society—Dr. Alley, then Secretary of the Society, by direction of the "Government of the Massachusetts Medical Society," issued a Circular, dated April 8th, 1861, to the Censors, reminding them that "all candidates *must* be examined by a Board of Censors."

Thus the whole matter of admission is with the Censors, whose duty, at all times, is to conform to the Laws of the State, and the instructions of the Councillors.

At the last annual meeting of the Society, June 2d, 1869, an amendment was offered by which a graduate of any University, College or Medical School, out of the State as well as within it, could become a member upon application and showing his diploma.

This proposition was, according to rule, referred to the Councillors.

Oct. 6th, 1869, the Councillors voted to refer the matter to a Committee, to report at the next regular meeting.

At the same meeting of the Councillors, Oct. 6th, 1869, an application for admission into the Society was made by a physician educated out of the State, who, after examination by the Censors of Suffolk District, had failed to satisfy them as to his qualifications, and was therefore rejected. He asked to be admitted through *the agency of the Councillors*, without the prescribed examination.

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* SECTION 7.—When any person who has been educated to the practice of physic or surgery, in any place out of this State, and who has come into this State to pursue the same, shall present himself to either of the said Boards of Censors as a candidate for their approbation or license, if they are satisfied that he has received an education equivalent to that prescribed by the regulations which have been or may be established by said Society, and that he has been duly approved by some competent authority, they may license him to practise physic or surgery, or both, as the case may be, without subjecting him to a new examination.

The Request was referred to the same Committee.

The Committee, Dr. Jacob Bigelow, chairman, now, Feb. 2d, 1870, report that there is no occasion for making the proposed alteration in the By-laws. They also report that no authority exists for interference in the duties and decisions which by law are vested exclusively in the Censors.

The Councillors will therefore clearly understand that—

Acceptance of the report of the Committee will be equivalent to a continued adherence to the instructions heretofore given by the Councillors to the Censors.

Non-acceptance will imply that the Councillors are willing to reverse their former instructions to the Censors, and are ready to grant the requests of the petitioners.

N. B.—After an animated discussion, the report of the Committee was "accepted and adopted," *one* only voting in the *negative*, out of forty-four Councillors present.

Medical and Surgical Journal.

BOSTON: THURSDAY, APRIL 14, 1870.

STATE BOARD OF HEALTH.

"THE proposition which reaches the legislature from the finance committee, to abolish the State Board of Health, is much to be regretted. It would be full of evil if it were adopted; it cannot be altogether harmless, even if it meets a prompt and decisive defeat. Let the principle once be established, that first-class men, answering, at a sacrifice to themselves, the call of the State for a great public service, are liable, after a single year of earnest work, barely establishing the foundations of a labor like theirs, to be sent back with a snub, and the State will be much poorer than it is now, even if the measure takes the guise of economy. Massachusetts cannot afford to send such an impression abroad.

The Board established by the legislation of 1869 has already abundantly demonstrated its own utility. It has not, indeed, as yet grappled with the great question of the use of intoxicating liquors, which might well demand more time for consideration in the present divided condition of public sentiment, than the first year's existence of a new body could give. But it has examined, in a manner calculated to inspire the highest respect for its decisions and recommendations, such vital questions as the sale of poisons, the method of slaughtering for the city market, and the comparative effects upon health and morals of different kinds of homes for the poor. It has touched, so far as opportunity allowed, upon other questions, and has cleared the way for a wider usefulness in the future, in the many tasks to be included under the general title of State Medicine. Its members working without pay, its cost has been far within the estimates made at the State House.

Upon such a state of affairs, six months after the first meeting of the Board of Health, it is proposed to abolish it altogether. Such a proposition needs only to be understood to be defeated. It is well calculated to remove all stability from legislation, bring the laws into contempt, and make boys' play of what should be the work of our best and wisest men.—*Boston Daily Advertiser*.

To the above remarks we have little to add beyond the expression of our astonishment that such a proposition as the one in question—worthy only of the prejudice of a community steeped in ignorance—should have ventured to show itself in the Legislature of the enlightened State of Massachusetts. Has the Board of Health interfered with private interests which are not mindful of the public weal? Is the offence rank, and does it smell to Heaven?

As to the question of the use of intoxicating liquors, it has been treated in so partizan a spirit—on both sides, perhaps—that we hardly see how the Board can at present touch upon it advantageously to themselves or any one else. We think the commission should be excused from engaging in the discussion of this topic; and should be required only to furnish well-attested scientific facts and generalizations, when called upon for such by the Legislature.

[Since having handed the preceding remarks to the printer, we learn that the Legislature has virtually decided that the Board of Health shall continue. Our law makers, as we are gratified to be able to state, have thus set themselves right before the world, *proprio motu*;—without any influence from the members of the Board, collectively or individually, directly or indirectly.]

RESEARCHES ON THE PATHOGENY AND TREATMENT OF TETANUS.

This is the title of a monograph in the *Archives de Physiologie*, by MM. Arloing and Léon Tripier. The authors present the result of experiments on animals :—I. To test the *humoral theory* of the pathogeny of tetanus. Pus and blood from men who had died of the disease, were injected at different times into the femoral veins of rabbits. In one case the knee was disarticulated two days after the injection. The animals recovered without tetanic symptoms.

Dogs became now the subjects of experiment. From a man affected with general tetanus pus and blood were taken two hours before his death. Into the femoral vein of one dog the *pus* was injected ; into that of the other dog the *blood* was thrown. No bad symptom appeared in either.

But to make these experiments complete it was considered requisite that the injection should be made from one animal to another of the same species. Accordingly a horse affected with tetanus was found, and blood from his jugular vein thrown into the jugular of an old horse destined to dissection at the Veterinary School. There was a slight elevation of temperature, but no other signs of illness. These negative results were considered a blow at the humoral theory ; which, however, was only shaken by them, not broken down.

II. The *nervous theory* of tetanus was investigated, but without result. Frogs, rabbits, dogs and a horse were subjected to mechanical irritation at points of the nervous periphery ; but, no tetanus was produced, and nothing abnormal found in the nervous system at any distance from the injured part. Galvanic irritation was now tried, on account of the well-known power of that agent, in the form of the continued current, to produce inflammation of the nerves. The two horses sacrificed to science had no tetanus, but died from sanguineous effusion. Perineuritis for an extent of from 15 to 20 centimetres was found, but no appreciable alteration beyond that distance. Spinal cord unchanged.

These facts being negative, our authors, for positive data, have recourse to clinical observation and pathological anatomy. It is generally believed, say they, that the elevation of the temperature in tetanus depends on the muscular contractions : but MM. A. and T. are quite opposed to this view. In the first place, they argue, the high temperature is not the rule. Nay, there are cases of tetanus—sub-acute or chronic—in which the muscular contractions are very great, and yet where the thermometer in the rectum gives no more than 38° or 38½° (centigrade). Finally, if the temperature be examined before and after the spasm, there is often found to be no variation ; or if there be any, it is no greater than ¼th of a degree ; whence they conclude that the elevation where it exists should not be referred to muscular contraction. They think its true cause to be elsewhere ; and are not disinclined to refer it to a lesion of the nervous centres. In fact, they have many times ascertained the existence of very marked hyperæmia, and of evident nuclear proliferation in the spinal cord. M. Ch. Bouchard is quoted as having verified these results in two instances where the affection followed an acute course. In one of these subjects MM. A. and T. also discovered a veritable neuritis in the external popliteal nerve. There was fracture of the leg, and the apparatus had produced an eschar in the region of the head of the peroneus. Higher up the sciatic nerve was quite normal. Do these changes obtain in all cases ? Our authors do not hesitate to reply in the negative ; and to add that it is precisely because the alterations are not always found, that they should be considered as superadded in some sort to a lesion which is less accentuated, though of the same nature ; but which from its situation induces fever and causes death. However this may be, the cases in which the affection remains local (tetaniform cramps of surgical patients) demonstrate that the irritation has its point of departure in the peripheral nerves, and produces simply an excitement of the spinal cord. In trismus, the process is the same, except that "the local symptoms" [as the cramps] more or less marked have escaped notice, and that the irritation is of more limited extent. The spinal cord may, however, be simply excited. In fact, it is not rare to see patients under attacks of tetaniform cramps present indications of trismus, while yet these same patients recover perfectly. Where the muscles of the trunk are affected, recovery may still take place, though it is true death is sometimes the result. But, in the latter event, the rectal temperature promptly rises to a high mark, whilst in the first instance it attains at most the level of 38° or 38⅖°. When the affection seems to invade at once all the muscles of the body, the congestion (*diffusion*) is at its height. We have no longer simple excitement—the process has changed its character ; and profound disturbances of nutrition have necessarily supervened in some part of the spinal cord. For, the rectal temperature gives from the outset 39° or 39⅖°, and the patients inevitably die. The column of mercury in these cases mounts in a few hours to 41°, 42°, or even 43°.

From the foregoing statements, MM. A. & T. conclude that thermometer furnishes very exact information as to the course and termination of tetanus. Whilst the rectal temperature remains low (under 38°), the prognosis is favorable ; and it is to be inferred that the nervous centres are not yet structurally changed. But the moment a high degree is reached (above 39°), the prognosis is unfavorable, and there is ground to fear alteration in the substance of the nervous centres.

If it be admitted, say our authors, that, in tetanus, the irritations are transmitted to the spinal cord through the mediation of the peripheral nerves, there is but one course to follow in the cases in which that affection appears as a complication of wounds of the extremities. It is requisite, they say, to interrupt as soon as possible all nervous communication with the spinal cord. To accomplish this, there is a choice of two measures—amputation or neurotomy.

The operation proposed by Larrey is a very serious one ; and when the rectal temperature is not greatly raised, one would naturally hesitate to perform it, especially if it be the thigh or the arm that is in question. Neurotomy is less objectionable, since patients at the end of five or six months recover sensation and motion. Up to the present time, only partial neurotomy has been advocated and practised—*i. e.* section of the nerve trunk, the branches of which supply the wounded region.

The operation recommended by MM. A. and T. consists of section of all the nerves of the limb—total neurotomy. They advise this on the ground that while a nerve remains intact in a limb, the morbid transmission may take place between the wounded part and the spinal cord. They further recommend that this complete section be made as high as possible, and that for two reasons: first, because by so doing the operator is almost sure to avoid direct and recurrent anastomoses ; secondly, because unless a certain distance be placed between the point of action and the wound, there is risk of leaving a portion of the affected nerve above that point and in connection with the spinal cord.

But, they insist upon early interference, before there be reason to suppose that lesion of the spinal cord has occurred ; and they assert that if amputation has hitherto given poor encouragement by its results, it is because it has been resorted to too late. Now, that they have pointed out in total neurotomy a rational means of arresting the progress of tetanus, and in the rectal temperature an exact land-mark to indicate the moment when the operation should be resorted to, they express the hope that surgeons will respond to their appeal. They think it hardly necessary to add that measures should be conjoined—externally and internally—to prevent tendency of blood to the spinal marrow.

Sir J. Y. Simpson's Case of Death from Chloroform.—Prof. Simpson's remarks on the above case have come to hand in the *London Med. Times and Gazette*, occupying a page and a half of the close type of that Journal, and are headed, "Sudden death in ovariotomy while the patient was under the influence of chloroform." He says :—

"According to all the experimental and clinical observations which have been made, chloroform appears capable of destroying life in two ways—namely, (1) by asphyxia and (2) by syncope."

He then collects ten cases of "sudden

death during surgical operations without anæsthetics," and adds :—

"If in the preceding cases chloroform had happened to be employed, the fatal results would naturally by most minds have been attributed to the anæsthetic, and not to the operation or the condition of mind or body connected with the operation."

In a note, he tells us that "In 1840, out of every 1,000,000 living in England and Wales, 24 were poisoned by opium and 22 by other medicines *improperly** given to children below the age of 5 years (See 'Seventh Annual Report of the Registrar-General,' p. 82). In England and Wales, in the five years from 1863–67, there were poisoned by preparations of opium 632 individuals; by salts of lead, 242; by overdoses of medicine, 52; by strychnine, 41, &c. There were drowned during the same period, while bathing, 707 persons; while sliding or skating, 116; burned to death by clothes taking fire, 2,194; killed by falls in walking, 194; suffocated by bedclothes, 2,332 children; suffocated by overlaying, 682; died from 'navel hæmorrhage,' 572, etc."

The *etcetera* includes, we presume, the reckless use of firearms, inflammable substances and other dangerous agents.

From all which Professor Simpson appears to point to the conclusion that patients should be "improperly" anæsthetized :—*i. e.* anæsthetized by chloroform instead of by a safer agent. Q. E. D.

We have received a pamphlet entitled "Reply to Dr. Lewis A. Sayre's Review of Dr. Ruppaner's Case of Laryngo-tracheotomy, to which is added a full account of the great poisoning case by partridges at the Fifth-avenue Hotel. By A. Ruppaner, M.D., Physician to the New York Dispensary for Diseases of the throat and chest, member of the American Medical Association, &c."

Dr. Ruppaner's summary with reference to the tracheotomy case is as follows :—

"I think I have proved, beyond peradventure—

"1. That, in my original report of Captain Bigelow's case, I had not the remotest intention to deprive you of what credit is due to you in the case.

"2. That the operation which you claim to have been one of such magnitude was one of simple tracheotomy only, which operation I am ready to perform any day, and which any surgeon, who has common-sense, can perform.

"3. That I offered you in my letter to make any additional explanation that might be necessary, and that you paid no attention to the same.

"4. That you, to put it mildly, misprinted a telegraphic despatch of mine to you.

"5. That you have presented my letter addressed to you in *a mutilated form*, retaining what was in your favor and expunged the rest, leaving it to be inferred that that was the whole.

"6. That you have put language into Captain Bigelow's mouth which, I think, he never uttered."

[The "partridge" matter is a new issue, which we will not at present rehearse.—Ed.]

Much inquiry having been made as to the present status of the Laws relative to admission of members into the Massachusetts Medical Society, we have asked and obtained a copy of the Remarks made at the recent meeting of the Councillors of the Society, by one whose former official position made him familiar with the subject. Those interested will find a clear and succinct statement of the whole matter on page 281 of this day's Journal.

Mr. Editor,—Will you have the kindness to say to the New England delegates to the American Medical Association meeting that is to take place in May at Washington, D.C., that if they want to get the "round tickets" from Boston to New York, they must present their credentials at the ticket office of the Old Colony and Newport Railroad Depot, Beach Street, Boston, and there obtain the "excursion ticket to New York and back to Boston." Price, $7.00.

Yours truly, Henry I. Bowditch.

The London *Lancet* * * * * speaks with much admiration of the Massachusetts Board of Health, quotes at length from the opening address of its chairman, remarks the comprehensive views of American Legislatures as shown in the founding of such a board, and commends several of the features and plans of the organization to the imitation of English sanitarians. It may be hoped that the proposition to extinguish the board after six months' work, will never be heard of in London.—*Boston Daily Advertiser.*

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* The italics are ours.

In a Report of the Meeting of German Naturalists and Physicians, at Innsbruck, in the *American Journal of Obstetrics*, we find the following:—

"*Schuller* (Vienna): *On Local Treatment of Diphtheria.*—Diphtheria and croup ought to be considered as affections with marked *clinical* differences. Rejects the application of nitrate of silver in diphtheria, both of the pharynx and the eyelids. Has frequently found that a diphtheritic deposit disappears later when cauterized with nitrate of silver than when not interfered with, and that neither the reproduction nor the spreading of the deposit is prevented by the solid stick. Applications of concentrated liquor sesquichloridi ferri exhibit no better results. Many authors consider such applications as directly injurious. Recommends strict cleanliness and tinct. opii.

"All the members present coincide with the above views; *Cohen, Ebert, Stiebel*, recommend ice and solutions of chlorate of potassa as local remedies; *Rinecker* alcohol, chloracetic acid, and hypermanganate of potassa; *Baumler* (London), carbolic acid.

"Prof. *Rinecker: On Encephalitis Congenita Interstitialis.*—This affection, which has been described first by Virchow, has been found by R. in all infants who died of marasmus in the first six weeks of life, although brain symptoms were absent. The disease appears to be related to physiological processes. May be that experiments made on starving young animals would yield instructive results."

Albany Medical College.—Dr. Thomas C. Durant, of New York, a graduate of the College, and an early student of Drs. March and Armsby, has given $15,000 to endow the "March Professorship."

Drs. E. R. Peaslee and Meredith Clymer of New York, and Dr. Wm. P. Seymour of Troy, have accepted chairs in the Faculty.

The Academy of Medicine and the Medical Press.—The Academy of Medicine in Paris, at its meeting on March 15th, elected M. Amédée Latour, many years editor of *L'Union Médicale*, to the honorary rank of Associate. This may fairly be regarded as a compliment paid to the medical press of Paris in the person of one of its most worthy representatives. The earnestness and ability with which M. A. Latour has made his journal a medium, not only for diffusing professsional knowledge, but for promoting professional interests and ethics, are well known, not only in the French medical world, but to those on this side the Channel who have been accustomed to read the French journals; and it gives us much pleasure to notice that a learned body, which does not scatter its honors broadcast, has selected him as the recipient of one of its honorary distinctions. —*British Medical Journal, March* 26, 1870, p. 319.

A Very Proper Resolution.—The Hennepin County Medical Society, Minnesota, has adopted a resolution, "That any member of the Society who shall permit his name to appear in connection with a report of a surgical operation or case of disease in the public prints, or who shall furnish any secular journal with such report for publication, shall be deemed guilty of gross violation of the medical code of ethics and of professional honor." The punishment, after investigation and proof, is to be reprimand for the first offence, and expulsion from the Society for the second. The Society has acted rightly.—*Ibid.*

Comparative Mortality in London and Paris.—The last weekly official returns of deaths in the respective capitals of England and France give the following results:—

	Deaths.			Deaths.	
	Lond.	*Paris.*		*Lond*	*Paris.*
Smallpox	8	90	Diarrhœa	16	5
Scarlatina	78	6	Dysentery	—	1
Measles	21	18	Croup	14	11
Typhoid fever	14	16	Puerperal disorders	17	11
Typhus	6	—	Other causes	1,099	868
Erysipelas	6	6			
Bronchitis	305	100			
Pneumonia	89	131	Total deaths	1,673	1,263

The above return is for London in the week from the 27th of February of the 5th of March, inclusive; and for Paris for the week from the 6th to the 12th. The population of London is estimated at 3,170,754, and of Paris at 1,825,274.—*London Times.*

Smallpox has been prevailing largely in Paris. In one week in March the deaths were 90 in number; and during the succeeding week 112.

DEATHS FROM CHLOROFORM.

In the mortality report of deaths in the city of Boston for the week ending Saturday, April 9th, is one of a man aged 65, who died "during inhalation of chloroform at Deer Island."

Medical Miscellany.

"SALVE! EXPERIMENTUM CRUCIS.—These two bits of pleasantry are from the last number of the *Harvard Advocate* (which, by the by, is an uncommonly good specimen of that bright little journal), and the I. G. feels bound to say that nothing half so good of their kind ever gets into Punch now-a-days. The scene of the first is a room in Stoughton; a student is discovered 'grinding,' and to him enters a Vendor of Salve:—

"*V. of S.*—'Want to buy some salve?'

"*Student.*—'No.'

"*V. of S.*—'Good for boils.'

"*Student.*—'I don't want any.'

"*V. of S.*—'Good for corns.'

"*Student* (with disgust).—'I haven't got any.'

"*V. of S.*—'Very nice to eat on bread!'

"Exit Vendor of Salve, followed by a dictionary.

"In the following the scene is transferred to a recitation room:—

"*The Passage.*—'Crux, Mattheus; crux, Marcus; crux, Lucas; crux, Johannes.'

"*Student* (translating).—'Cross Matthew, cross Mark, cross Luke, cross John.'

"*Instructor* (dryly).—'We have no other record of uneven temper in the Evangelists.' (Uproar.)"—*Boston Daily Advertiser.*

The above "extract" was cut out and sent us by a friendly scalpel. With it was a bottle "contributed" to the Editor's table. The flask contained a red fluid, which obviously was not ink. Presently we discovered an "addendum" in the form of a letter to the Editor, suggesting that what was in the bottle might, like the "salve" at Harvard, or like "Stoughton's Elixir," enable us to eat our bread without "addition." Finally, we hit upon a "measure" to discover what was in our correspondent's communication without going through it till we should have more leisure. That is to say, we found the following verse, quoted from D. D. S. (Dante's Divine Stanzas) Parsons.

"If to any Saint I pray,
It shall be to St. Peray.
He alone of all the brood
Ever did me any good."

These lines showed us that the "article" sent us had already gone through the "press;" and was sure to be "sound," for *in vino veritas.*

A correspondent from Lowell sends us the following card:

"J. C. HOWE, Healing and Developing Physician, cures all diseases of body and mind, teaches the practical working of the Laws of Life, both Spiritual and Physical, is all things to all people. Ask and ye shall receive, without a price."

THE HUNTERIAN SOCIETY.—A very interesting paper was read by Dr. Peacock, on Wednesday last, at this society, consisting of notes on American and Canadian Hospitals. The materials had been obtained during a tour made last autumn, and, although necessarily brief, gave instructive facts as to the medical school, licensing bodies, hospitals, asylums, museums, and other institutions in connection with professional pursuits. The criticisms were especially valuable as coming from a mind trained by much previous observation of kindred institutions, both at home and abroad.—*British Medical Journal, March* 26, 1870, p. 319.

MEMBERS of the profession interested in Diseases of the Eye are invited to visit the Ophthalmic Clinique of the Boston City Hospital, at their convenience, on Mondays, Wednesdays and Fridays, from 9 to 11 o'clock.

HENRY W. WILLIAMS, M.D., *Oph. Surgeon.*

BOOKS AND PAMPHLETS RECEIVED.—The Indigestions or Diseases of the Digestive Organs Functionally Treated. By Thomas K. Chambers, M.D. Third American Edition, Revised. Philadelphia: Henry C. Lea. Pp. 383.—Florida and the South. By Daniel G. Brinton, A.M., M.D. Philadelphia: Geo. Maclean. Pp. 135.—Correspondence concerning a Fatal Case of Placenta Prævia. Prepared by Charles E. Buckingham, M.D., Professor of Midwifery and Medical Jurisprudence in Harvard University, and printed for the Benefit of the Profession. Boston. Pp. 29.—Reply to Dr. Lewis A. Sayre's Review of Dr. Ruppaner's Case of Laryngo-Tracheotomy, to which is added a full Account of the great Poisoning Case by Pastilles at the Fifth Avenue Hotel. By A. Ruppaner, M.D., Physician to the New York Dispensary for Diseases of the Throat and Chest, &c., New York. Pp. 29.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending April 9, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases	
		Consumption.	Pneumonia.
Boston	109	14	14
Charlestown .	13	4	0
Worcester . .	27	6	2
Lowell	15	6	1
Chelsea	4	0	0
Cambridge . .	11	2	4
Salem	9	3	1
Lawrence	6	2	2
Springfield . .	8	4	0
Lynn	8	2	1
Pittsfield	4	1	0
Gloucester . .	10	2	2
Fitchburg . . .	3	0	1
Newburyport .	3	0	1
Somerville . .	3	0	0
Fall River . .	16	3	1
Haverhill . . .	2	0	1
	251	49	31

Boston reports four deaths from smallpox. From all the above-named places there are reported six deaths from scarlet fever, six from croup, four from diphtheria, four from whooping cough, and five from typhoid fever.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending April 9th, 109. Males, 57—Females, 52.—Accident, 5—anæmia, 1—apoplexy, 3—disease of the brain, 7—bronchitis, 5—cancer, 4—cholera infantum, 1—consumption, 15—convulsions, 3—cyanosis, 1—diphtheria, 2—dropsy, 1—drowned, 1—scarlet fever, 5—typhoid fever, 3—hæmorrhage, 3—disease of the heart, 2—insanity, 1—intemperance, 1—disease of the kidneys, 3—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 11—malformation, 1—marasmus, 1—old age, 6—paralysis, 1—premature birth, 2—puerperal disease, 3—rheumatism, 1—scalded, 1—smallpox, 4—disease of the spine, 1—synovitis, 1—tetanus, 1—unknown, 2—whooping cough, 2.

Under 5 years of age, 34—between 5 and 20 years, 13—between 20 and 40 years, 23—between 40 and 60 years, 24—above 60 years, 15. Born in the United States, 72—Ireland, 25—other places, 11.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

LESIONS OF THE BASE OF THE BRAIN.

By S. G. Webber, M.D., Boston.

In a former paper* none of the following cases were reported, as in none then seen was an autopsy obtained, and it was the intention to give only cases where an autopsy had confirmed the diagnosis. Since the publication of that paper other cases have been seen, and as the comparison of these cases brings out points of difference instructive in regard to diagnosis, they are now given. Circumstances have delayed the completion of this paper, and also prevented the author from making an examination of the patient in Case VII., who was under Dr. Sinclair's care at the City Hospital, and who kindly permits the use of the case for the purpose of illustrating this paper.

Of the other cases, three were observed at the City Hospital, and three at the Massachusetts General Hospital, through the kindness of Drs. Bowditch and Minot.

No attempt is made to settle the nature of the lesion in most of these cases, as it is believed to be generally impossible to decide this question satisfactorily.

Case I.—*Headache from Exposure to Sun. Loss of Power in right Leg, and recovery of its Use. Subsequent Loss of Power in left Arm and Leg, with Hyperæsthesia to Pain. Paralysis of Tongue, of Ribs, and of Diaphragm on the Left. Face Paralyzed on Left. Anæsthesia in both Arms and Neck.*

Patrick F., æt. 45, laborer, entered the City Hospital April 23d, 1869. His wife stated that in June, 1868, while walking in the sun on a very hot day, he became faint, pale and sick, and was obliged to go home; she said that he had headache during the rest of the summer, and was obliged to stop work. He himself said that in Aug. 1868, while employed as a hod carrier, and exposed to the sun, he was compelled to give up work, on account of pain shooting from one side of his head to the other, with dizziness, and a sensation as if his head would burst. This feeling came on suddenly. He did not fall nor lose consciousness. There was no perceptible loss of power at once, but he did no real work afterwards.

Three months before entering the hospital he had loss of power in the right leg, which afterwards recovered its strength.

He remained in bed more or less from September, on account of pain in head, hiccough, and weakness. Five weeks before entering the hospital, after getting up in the morning he felt a sort of sleepy feeling coming on in his left hand and leg. This feeling increased, and he gradually lost power over them, until he reached the condition he was in when the record was made.

He suffered from severe and constant pain and fulness in his head, especially over the frontal region. There was great tenderness on pressure on both sides. Sometimes there was jerking of the left leg. His eyes were not sore or painful, but there was decided loss of visual power. Motion of his head in any direction caused pain in the sub-occipital region. There was some dysphagia and thickness of voice.

It was recorded on the day after his entrance to the Hospital that there was excessive hyperæsthesia on the left side, sensation being normal on the right.

He had constant hiccough, and at times dyspnœa; his hiccough gradually became less severe and distressing; the dyspnœa was at times very harassing.

The above is taken from the records of the hospital, as it was not thought best to weary the patient by a too prolonged examination.

When seen he was lying on his back. He could see objects at a distance, but not so clearly those which were near. The right pupil was larger than the left, the left being rather more contracted than normal.

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* See this Journal, Vol. IV., No. 6, p. 93, *Concerning the Diagnosis of Lesions of the Base of the Brain.* In that paper the reference to Case V., p. 100, was inadvertently omitted; it should have been referred to Ed. Medical Journal, 1860–61, p. 794.

The left also responded to the stimulus of light less readily than the right.

It is stated in the hospital records that the left cheek was flabby, and dilated on blowing. This could not be seen at the time of the examination. On laughing and blowing the facial muscles seemed to work well on both sides. There was no ptosis. He protruded his tongue to the left. There was complete paralysis of motion in the left arm and leg. Respiration was peculiar and one-sided. The left side of the abdomen was always fuller than the right, and did not move during respiration.

The right side moved naturally, and on expiration a hollow was formed at the lower margin of the ribs, which contrasted strongly with the fulness noticed on the left side. The ribs on the left side were nearly or quite stationary during respiration. Respiration was accompanied with a peculiar sighing and sucking noise.

On tickling the soles of the feet the right foot was voluntarily withdrawn, but the left was not moved, though he showed by an exclamation that he felt the tickling there more than on the right side. Sensation to pinching was much greater on the left than on the right side, and perhaps greater than normal. The hyperæsthesia to pain on the left was also shown by the fact that a moderate pressure with the æsthesiometre produced discomfort. On the right firm pressure, so as to leave deep indentations, was at times not felt.

The following is the result obtained by the æsthesiometre. A blister on the neck interfered somewhat with the result as regards the neck and cheek.

		Distance at which 2 points were distinctly felt.	
		Mm.	
Leg just above kn.,	rt.	70	(2·73 inches.)
" "	lft.	30	(1·17 ")
Transverse, forearm,	rt.	only 1 point at 65	(2·53 ")
" "	lft.	45	(1·75 ")
Longitudinal "	rt.	felt nothing at 85	(3·31 ")
" "	lft.	80	(3.12 ") seemed about ¼ inch apart.
" arm,	rt.	100	(3·9 inches) when pressed hard felt only as 1 point.
" "	lft.	100	(3·9 inches) only when pressed hard.
Neck, right		55	(2·14 inches)
" left		55 or 65	(2·14 or 2·53)
Cheek, right		65	(2·53 inches)
" left		55	(2·14 ")
Forehead, right		30	(1·17 ")
" left		60	(2·34 ")

When I saw this patient, the hyperæsthesia on the left was much less than when he entered the hospital. His hiccough diminished in severity, and his dyspnœa increased, until May 1st, when he was removed by his friends. In a week or ten days he died.

The sensibility to touch was diminished on both sides, but most so on the right, except in the forehead.

Two explanations of these symptoms seem possible; either (*a*) two lesions, one situated below the decussation of the anterior pyramids, and the other in the medulla above that point, so as to implicate the hypoglossal and the sensory branch of the fifth; or (*b*) one lesion situated above the decussation of the hypoglossal, involving some of the sensitive fibres of the fifth, and in the sensory tract on the left, crossing over to the right and affecting slightly the sensory tract and much more the motor tract, not producing entire destruction of the nerve fibres, but diminishing them in number or in conducting power, so as to render motion impossible on the left, and to greatly diminish sensation on the right and somewhat diminish it on the left.

In favor of *a* is the loss of motion in the left arm and leg and the whole of the left side of the body, the hyperæsthesia to tickling and pain on the left, and the diminution of the sensation of touch and apparently of pain on the right. But the sensation of touch is also rather dulled on the left, especially in the arm, and is diminished in the neck and cheek, and especially so in the forehead. This would show that the sensitive tract is implicated on both sides; for if the lesion was in the cord and confined to one side, there should be very decided hyperæsthesia on that side below the point of injury, which is certainly not the case here. Hence a moderate loss of sensation on the same side, with motor paralysis, shows an amount of lesion to the sensitive tract greater in proportion than the same diminution would show if found on the opposite side. The temporary loss of power in the right leg would also show the existence of morbid action on both sides.

The pain and fulness in the head, and the pain felt in the suboccipital region on moving the head, point to the upper part of the cord or the medulla and pons as the seat of the lesion, though not necessarily so. The peculiar one-sided respiration shows that the cord was affected above the origin of the phrenic nerves; that is, above the 2d cervical, or that the centre of respiratory motion in the medulla was affected.

As there must be two lesions, if one was situated below the medulla, and as there is no sign of sclerosis in patches (*sclérose en plaques*), and as one lesion above the anterior pyramids in the medulla will explain all the phenomena, I am more in favor of the second supposition, locating the lesion in the medulla near the *nœud vital*. The loss of power, which was afterwards regained, may be explained either by supposing it to have been reflex, arising from irritation of portions of the nerve tissue in the neighborhood of the disease, and which disappeared when the disease had advanced farther, or it may have been due to local changes in the circulation, which afterwards disappeared.

This case also shows the separate character of the sensation of touch and of pain.

CASE II.—*Symptoms following Exposure to Heat. Disturbance Confined to upper part of Medulla and lower edge of Pons. Relief from Bromide of Potassium.*

Dennis L., æt. 6, was brought to me last July. For three days he had not been able to speak. When first taken he was sick to his stomach, and not able to stand. His mother thought that his right leg was weaker than the left, and that he dragged it when walking.

When seen he complained of pain in his forehead and the back of his head. He said he felt when touched. There was no reflex action on tickling the meatus auditorius, or any other part of the face. The pupils responded well to the changes of light. The eyes moved well, and there was no ptosis. He could shut both eyes. His tongue protruded to the right. The saliva ran out of his mouth, his mother thought more on the left side than right. He choked sometimes on swallowing. The previous week he could not keep his food in his mouth while eating. He could open and close his jaws. Articulation was so indistinct that it was difficult to understand his meaning. His mouth and lips did not move on either side when he spoke, and it was not possible to make him smile; the lower part of his face was motionless except when his jaws were moved. The power of grasping was about equal in both hands.

Two days later he was again seen. It was recorded that the soft palate hung down a little on the left, the uvula was about straight, if anything it bent a little to the right. The tongue was protruded better, he walked better and talked better, there was some motion to face, but it was slight.

This boy had been exposed rather more than usual to a hot sun just before the attack. A disturbance of the circulation at the base of the brain was diagnosed, and bromide of potassium and cold to head were prescribed. The bromide was given, but the cold was not used. When seen the second time the mother thought he had improved much. He was not seen again, and therefore it is not possible to say what the final result was.

The disturbance was limited to the base of the brain below the middle of the pons, the seventh and the sensitive root of the fifth on both sides, the hypoglossal on the left, and seemingly also the spinal accessory were affected. The ocular nerves and the motor branch of the fifth seem not to have been affected, also some of the fibres of the seventh, which supply the upper part of the face, seem to have escaped. Hence the seat of the lesion was probably the upper part of the medulla, and perhaps the lower edge of the pons. The respiratory nerves, those, I mean, supplying the diaphragm and the ribs, were not affected.

This case is interesting in connection with the previous one. In both the symptoms followed exposure to the sun, and in both the affection was at the posterior part of the base of the brain.

The following three cases were seen at the Massachusetts General Hospital on Nov. 23d, 1869.

CASE III.—*Alternate Paralysis. Face Affected on Left, Limbs on Right. Embolism.*

John H., colored, æt. 50. He seemed to be naturally a very intelligent person, but his statements in some unimportant particulars did not agree with those which he gave when he entered the Hospital.

He had enjoyed good health during the early part of his life. He was born in Baltimore. Had ague when quite a boy. He had lived at sea for about nine years, till summer before last. Winter before last had two or three falls on the ice; struck the back of his head. This last summer, while in Baltimore at work in a brick-yard, the bricks fell in and struck him on the right side of his head, shoulders, and body. He fell down, but was not much troubled by the accident, except from lameness in his hip. Had rheumatic pains in many parts all last summer before he was hurt. Never had any venereal disease.

Early in September he was paralyzed in his face. He had occasionally pain in his head. His left eye watered very much. His right ear was a little deaf. He could smell both sides and taste on both sides. (He said he tried to see whether he could; how far his trial was such as to give correct results is uncertain.) He had no difficulty in swallowing and none in breathing. Food did not return through his nose. He had a little difficulty in talking, because his left cheek puffed out; and food collected between the left cheek and the gum.

There was after a short time itching in the right side, and that side felt "puffed up." (He seemed to mean by this that there was numbness. It was not certain how long before the paralysis of the limbs this occurred.) He had no smarting, no sharp darting pain, only a little dull pain in hip. He urinated freely. Was habitually costive, and seemingly no worse lately.

In his statement at his entrance to the Hospital, he said he was first affected with paralysis only a few days before the attack of his arms and legs.

Early in October (Oct. 2d, it is stated), he staggered and fell against a wagon. He managed to get home. He could not move his right leg much, and could move his right arm none. He could move his leg very much more than his arm. There was no vomiting. His food sets well, he has a good appetite, and is not troubled with flatus. He has a slight cough. When first taken in his face he had some trouble with phlegm, but none now.

Now, the left eye does not close so completely as the right. Both are opened equally well. The pupils of both eyes contract on exposure to light, the right a little more readily than the left. Both eyes move well, no strabismus.

The tongue is protruded straight, and apparently moves freely in all directions, but he says it is easier to turn it to the right than to the left. Food catches in the left side, and he is troubled about swallowing.

He moves the right side of his face more easily than the left, though he seems able to move the left a little.

He can flex the forearm on the arm a very little, can adduct arm a very little, other motions impossible. The arm is rather stiff; only outward rotation causes pain if carried beyond a certain point.

He can move right leg slowly in all directions as he lies in bed, but adduction is very difficult, and he can only with great exertion cross the right leg over the left. Muscular sense seems preserved in right arm and leg.

On examining the heart a rough murmur was heard with the systole, loudest over the aorta.

Temperature in the right axilla, 98¾.
" " left " 97½.

The following is the result of examination by the æsthesiometer.

Place.	Distance at which 2 points were distinctly felt.	
Leg on inside below knee, left,	1⅝	inches.
" " " right (not satisfactory)	1⅝	"
Chest above and inside of nipple, left,	1⅜	"
" " " right,	2¼-2⅜	"
Forearm, left,	⅜	"
" right	2¼-2⅜	"
Back of hand, left,	¾	"
" " right,	1⅜	"
Neck over posterior edge of s. m. left,	⅞	"
" " " right,	¾	"
Cheek over malar bone, left,	⅝	"
" " right,	⅜	"
Scalp just over eye above temple, left,	⅝	"
" " " right,	⅛	"

Feb. 25th, 1870.—Was seen again. He moves his leg better, and can walk about the wards, and even out doors, without much difficulty; when lying down he can cross the right leg over the left much better than at the first examination, and bends the knee a little better; he can abduct better than adduct the leg. The motion of the right arm is about the same as at first examination; the righ forearm cannot be straightened beyond a right angle; he can flex the forearm a little and adducts the arm a little, he cannot abduct nor raise his arm and cannot move his fingers. The right leg and hand tremble considerably when lying down, not when he stands up. The motion of the left side of the face seems to be a little freer. There is some lacrymation and a little purulent discharge from the left eye, and he cannot see so well with it. The motions of both eyes seem good, and no difference could be noticed between the pupils, both responding equally well to the stimulus of light. The ticking of a watch could be heard more than three times as far with the left ear as with the right.

The following is the result of an examination of the sensation of touch with the æsthesiometer.

Place.	Distance at which 2 points were distinctly felt.	
Leg on inside, left,	1¾	inches.
" " right,	1½	"
Chest over pectoralis mag., left,	2	"
" " right,	2	"
Forearm, left,	1½	"
" right,	1½	"
Back of hand, left,	1¼	"
" " right,	1¼	"
Neck over edge of s. m., left,	3	"
" " " right,	2½	"
Neck, transverse, over s. m., left,	1½	"
" " " right,	1	"
Cheek over malar bone, left,	⅝	"
" " right,	⅝	"
Over parietal bone, left,	1½	"
" " right,	1¾	"

This case is interesting from the clearness with which the symptoms are marked.

As he has been improving since his stay at the Hospital, and as it is evident from the amount of paralysis that the lesion is not extensive, there is a possibility of his recovery.

This was written before the second examination. Of course now the favorable prognosis is confirmed, but it is still uncertain how much use of the arm he will finally have, and the diminished sensibility on the left is not very favorable.

In view of the existence of a previous rheumatic attack, and of the existence of a lesion of the aortic orifice, it is not improbable that there has been obstruction of an artery. The existence previous to the last attack of symptoms referable to the base of the brain is in opposition to this view, and diminishes the certainty of the diagnosis. It is not very rare for an injury to cause no immediate cerebral symptoms, but subsequently serious changes may occur in consequence. This may be such a case, and the sudden attack in October may be only the sequel of the lighter affection which was present in September, and both may be due to the blow on the head received in Baltimore; but against this there is the objection that such cases are rare, and usually the injury is more general, not being limited to a comparatively small spot. Again, both attacks may be due to embolism, which seems more likely to be the case. It was not intended, however, to discuss this question.

The symptoms point to the posterior part of the base, to the lower edge of the pons. As the nerves supplying the eye and the hypoglossal are not affected, and as the spinal accessory is not interfered with, the seat of the injury must be between the origin of the sixth and of the spinal accessory and hypoglossal.

Of the cranial nerves, the seventh is the most affected, but as it is the left facial which is paralyzed, while it is the right arm and leg which are affected, the lesion is on the left before the seventh crosses. If the deafness of which the patient speaks is recent and connected with the present affection, then the eighth is affected after it crosses. The fifth seems to be partially affected, and there are subjective symptoms referring to the hypoglossal, but the amount of these changes is slight, and may be due to the boundaries of the lesion encroaching on the domain of these nerve centres.

The sensibility was nearly the same in both legs. As the legs were also less affected than the arms in regard to motion, this is one case in favor of the view that the nerve fibres supplying both motion and sensation to the lower extremities, ascend through the pons in a somewhat different place from those supplying the arms; in other words, the fibres for the lower extremities are grouped together, and also those for the upper extremities.

If the symptoms are caused by an embolism, the locality is unusual. The place in which this most frequently occurs is one of the branches of the middle cerebral artery. An embolism of an artery supplying the pons is rare. But the small extent of the lesion shows that if the symptoms arise from an embolism, the foreign body must be small, and hence would probably be more likely to take a course different from that taken when it is larger.

Case IV.—*Lesion in Pons. Paralysis of left Side of Face and Limbs to Motion and Sensation, and of right Leg to Sensation. Interesting Phenomena connected with Sensation.*

Wm. C., æt. 56, currier. Has a scar over right eye, received when 10 years old; bone not injured. Twenty-five to thirty years since, his arm was severely injured in machinery. Generally healthy. Never had rheumatism. Had had vertigo and slight headache for some months before he was attacked. About two years since, while walking, his strength gave out, but he got home alone. His left leg and arm were very weak. He could swallow well and chew well. Food was not caught between the teeth and gum. There was slight salivation. At first he grew worse, but for the last two months he has been growing better.

Now, he shuts both eyes easily, but the left eye is not shut so closely as the right. The left pupil responds scarcely at all to light, but the right moves readily. Both eyes move well. No strabismus. No ptosis. He can now read only coarse print. His tongue moves easily. His face moves most readily on the right side. He has a little increase of salivation over what is natural. He cannot move his left arm. He can extend his left leg a little, but has control over no other motion. The fingers are contracted. The left forearm is contracted on the arm, and the arm is stiff at the shoulder. Bowels regular, about once in two days. He had one involuntary dejection. His water comes away slowly. His left foot is most sensitive to tickling. Heart sounds are normal. Temperature on both sides is 99°.

The following is the result obtained with the aesthesiometer.

Place.	Distance at which 2 points are distinctly felt.	
Inside of leg, left,		3½ inches only 1 point.
" " right,		3½ " " "
Front of thigh, left		3½ " " "
" " right,	2 inches.	
Chest, left,		3½ " " "
" right,	2½ "	
Forearm, left,		3 " " "
" right,	1½ "	
Neck, left,		3½ " " "
" right,	1½ "	
Cheek, left,	2 "	
" right,	1 "	

On the right leg there was considerable hyperaesthesia, the contact of the two points causing great discomfort, much more than is natural, and producing a complaint of a burning sensation. The same burning sensation was felt to a less degree in the left leg. Possibly this sensation in the right leg may have interfered with distinguishing the two points.

On asking him to point to the spot which was touched on the left side, when the sensation of only one point was produced, he placed his finger nearly midway between the two points on his neck. When they were on his left forearm, he at first placed his finger on the inner aspect of the arm, not far from the shoulder; then, finding he was mistaken, he moved his finger about in an uncertain way, until after two or three trials he felt the instrument with the finger of his right hand. When the points were on his left leg, he pointed to the centre of his left thigh; but on the right leg he pointed to a spot about midway between the two.

About a week after he was seen, he left the hospital.

The lesion in this case is above the hypoglossal; it is so situated as to include both the seventh and the fifth of the left side, the motor fibres of the left extremities and the sensory fibres of the left arm and of both legs, but the left leg more than the right. The fibres conveying pain from the right leg seem at some part of their course to be irritated rather than destroyed. The ocular nerves were not affected. The injury was, then, on the right side, after the crossing of the seventh and fifth, involving the sensory tract and still more the motory, and so situated that an irritation at least was felt by the nerves on the left which supply the right leg. The seat of the lesion, then, must be in the pons, above the point which was affected in Case III., probably near the upper border of the pons.

CASE V.—*Paralysis of left Side gradually Increasing. Excessive Salivation. No Loss of Sensation.*

Henry ———, æt. 51. Several years since he received an injury which has caused him a lame back since; more than a year ago his back was more lame; he then had frequent micturition, which continues in a measure. He was obliged to rise four or five times at night and relieve his bladder. He thinks he had a slight attack of paralysis a year ago or so, as his left side has seemed weaker than it was before. His left ear and neighboring parts of face were numb.

In February, 1869, he felt dizzy, and then his left knee suddenly gave out and he nearly fell. He then walked a short distance and sat down, when he had a second attack of dizziness. After the first day he could move about, but after two to three days, his arm became affected, and that with his leg grew worse. A month later salivation came on. He had a sensation of a string in his throat first. His food lodged in the left side of his mouth, and in chewing, his lips were caught by his teeth on that side. He did not swallow so well as natural. Respiration was not interfered with. Speech was rather thick. Mouth was drawn to right. His bowels, which were usually regular, had become costive.

Now his left eye does not close so perfectly as the right. He opens both eyes equally well. Both eyes move well, no strabismus. Pupils respond well to light, but right better than left. Tongue deviates to left; it moves, however, in all directions. He blows through the left side, and the saliva runs out at that side. He is very much troubled by excessive salivation. The right side of his face moves more readily than the left.

There has been some improvement since he has been in the Hospital, and now the left arm can be raised as high as the shoulder. The leg can be extended, but not flexed, abducted, nor adducted.

He has dizziness, which he feels mostly in the back part of his head, and on making extra exertion he has a sharp pain on the left side, which is only momentary.

There is numbness of the left hip only. Itching in left arm and leg, tingling in hip-joint.

The fingers, wrist and elbow on the left side are contracted; they drew up a little at a time; this contraction sometimes relaxes, and he can manage them well, then they contract again.

There has been twitching of left leg and foot, but it was probably caused by strychnia before he came into the Hospital. When he gapes his arm and leg are stretched out.

There is a very little more reflex action on tickling the left than when the right foot is touched.

He says he cannot cough so freely or so strongly as when he was first taken.

No discharge from nose.

The left arm is much smaller than right, which he says is due to a burn received eight or ten years ago.

Temperature about the same in both axillæ.

There was essentially no difference in the sensation of the two sides.

In this case, certainly, the sensory tract was respected. The question then arises, whether it may not be one of those cases of reflex paralysis due to lesion of the cerebellar peduncle.

The tendency to twitching, amounting almost to spasm, the contraction and relaxation of the arm, would point to this as the case. It is not, however, an easy question to decide. If it is not so, then the lesion is on the right side of the pons, and is confined entirely to the motor tract.

In both this and the preceding case the salivation was remarkable; it did not seem to be viscid, as when the lingual is divided, but rather seemed to arise from irritation of that nerve.

Feb. 25, 1870.—This patient was seen again. He said there was not so much spasmodic contraction of the arm as before; it will now hang down when he stands. His head is not so dizzy, and there is not so much salivation. His left foot and leg do not shake so much, and he can move them a little better, and he walks firmer and longer. When he stoops and raises his head, he is still slightly dizzy. The tongue is protruded a little to the left. He chokes on swallowing. The sensation to touch is somewhat altered. Thinks he can bite on both sides alike. Moves face on right side easiest. Pupils contract equally.

Place.	2 points felt as such at a distance of	
Forearm, left,	1½	inches.
" right,	1	"
Back of hand, left,	¾	"
" " right,	½	"
Cheek, left,	⅜	"
" right,	½	"
Over eye, left,	½	"
" right,	½	"
Leg, left,	2¼	"
" right,	1	"

The progress of the case is in opposition to the view that the symptoms are caused by a reflex action. The patient thought himself better, and in some respects he seems to be better; but from the results obtained in regard to sensation it is doubtful whether there has been any real improvement. If the convulsive movements, when he was first seen, were caused by strychnia, their cessation is easily explained without recourse to improvement, and perhaps also the disappearance of the vertigo. The prognosis is not very favorable.

The following case, seen at the City Hospital, is not so clear as the others. The patient was not in a condition to give a very satisfactory account of herself.

Case VI.—*Facial Paralysis on the left. Diminished Power in right Leg. Loss of Muscular Sense in right Leg. No marked affection of Sensation.*

L. D., æt. 69. As far as could be learned, the attack occurred suddenly; she fell down just after supper and vomited. Another statement says she lost the use of her lower limbs gradually. She is said to have since improved in the power to use her hands.

When seen, she kept her hands and head in continual motion, and moved the upper part of her body very much. The legs were not moved unless she was told to. On pinching the legs and thighs pretty hard she said she felt it, and moved her legs a little.

There was no ptosis; she closed both eyes well; both pupils acted under the influence of light, and were of about equal size, the left possibly a little larger than the right. The left, however, acted more sluggishly than the right. The eyes moved well in all directions. No strabismus. The mouth was drawn to the right. The tongue protruded in a straight line. She moved her head well when it was possible to make her understand what was wanted. She seemed to feel pinching equally in both arms, and also light touching. She was able to touch any part of her head with both hands. She could bend both knees, but the right not quite so well as the left. She could not always touch her right knee with her eyes covered. Once, when told to touch it, she tried several times, and each time touched the left instead, and then gave up, saying she could not do it.

She said there was no itching nor tingling, and but little pain in either legs or feet.

She withdrew very quickly both legs

when the soles of the feet were tickled. No tenderness along spine. Palate not examined.

There was no evidence of any disorder to produce reflex paralysis.

There may in this case be more than one lesion, as the intellect was very much affected, or that may be due to senile decay.

The principal lesion causing the paralytic symptoms was, however, situated in the pons, since there was alternate paralysis. The face was affected on the left; the right leg more than the left, and the muscular sense was lost, or nearly lost, in the right leg. The left pupil was also more sluggish than the right. None of the nerves anterior to the seventh were affected, so far as could be learned. Hence the seat of the lesion was probably in the lower part of the pons near the median line, but rather more to the left and before the crossing of the seventh nerve; also the motor nerves of the arm were affected only at first, and later perhaps subjected to an irritation which would account for the incessant motion of the arms. It is, however, with some hesitation that I give this case and its explanation, for the data are not complete.

Case VII.—*Paralysis of Face; Headache; Partial Paralysis of Limbs. Autopsy.*

R. B., æt. 21, entered the City Hospital on Oct. 27th, 1869. He was said to have enjoyed good health until six weeks before his entrance, when he first noticed that he could not close his left eye. He had at that time severe headache confined to the frontal region, which lasted only a short time.

The following are the symptoms mentioned in the Hospital records.

All the muscles on the left side of the face, including the buccinator, were paralyzed, the tongue protruded to the left, and he could not chew on that side. On walking or standing he was dizzy. When standing he was inclined to fall to the left; subsequently the motion of the left arm and leg were impaired; this loss of motion did not amount to complete paralysis, only impairment, and remained the same for several weeks. About a month after this was recorded there occurred involuntary motion of the left hand and arm, with stiffness on extension, and a week later he could barely support himself for a minute or so on the right leg and not at all on the left. I saw him at that time, and think the limbs could be moved while he was lying abed, though nothing is said of this in the record.

Jan. 21.—There was noticed to be difficulty in swallowing liquids, which increased till his death. The saliva flowed from the right side of his mouth without restraint.

Sensation was affected chiefly in the face, not being changed in the limbs or body. There was pain on the left side at the exit of the facial nerve, and later on the internal surface of the left arm. Headache was present most of the time, not continuous, but in paroxysms, generally frontal or parietal, occasionally occipital, and usually on the left side; during the last month of his life it was very severe. The left cheek was numb, and in the middle of January it is said that the left eyeball was almost insensible to touch. He had been partially deaf in the left ear for six or seven years; the sight of his left eye was diminished, and finally the right eye diminished in power. Towards the end there was pain over the pubes.

He had stupor for two or three days, December 18th and 19th. Occasionally his face would be covered with sweat, but this may have arisen from the severe headache. There was flushing of the face on slight exertion, the left conjunctiva was injected, the left pupil contracted, and there was prominence of the eyeball. Nausea and vomiting are mentioned in the beginning of January.

He died Feb. 18th.

The autopsy was made by me eight hours after death.

The vessels of the meninges were strongly injected; at the base of the brain the congestion included the arteries as well as the veins.

About four ounces of serum, by estimate, were found in the lateral ventricle. The brain substance was firm, with many puncta vasculosa. On removing the brain, the left side of the cerebellum was found to be very prominent, being half as large again as the other side; the medulla was pushed towards the right side, and the lower part of the pons was tipped out of place. The first, second, third and fourth nerves were unimplicated. The sixth nerve, from the point of apparent origin nearly to its entrance into the canal of the dura mater, was embedded in a layer of firm tissue, which extended over the upper part of the lower surface of the left lobe of the cerebellum, and implicated nearly the whole of the sensitive division of the fifth nerve. The seventh and eighth nerves could not be found; their usual seat being entirely covered over and filled up by a morbid growth.

The ninth, tenth and eleventh were not affected by the growth, but lay over the abscess, and were evidently put on the stretch. The twelfth did not seem to be implicated.

Along the side of the medulla was a swelling, soft and fluctuating, which on being opened gave exit to a large amount of pus of a peculiar pea-green color. The cavity of the abscess was nearly as large as a walnut, and had a distinct lining membrane covered with small prominences like villi. This abscess extended upwards and inwards under the medulla and lower edge of the pons not affecting the cerebellar peduncles, except by pressure, seeming to lie between the lower and middle peduncles, and to press them apart; the lower peduncle was spread out fan shape over its surface. It extended down almost to the lower part of the left cerebellar lobe, near the median line, the corpus dentatum not being affected.

On the outer side of this abscess was another as large as a shellbark, separated from it by a thin wall of cerebellar tissue, occupying the lower part of the upper portion of the left cerebellar lobe. The fourth ventricle was a little larger than usual, the wall of the ventricle being stretched over the abscess.

The morbid growth consisted of cells in groups by themselves, and fibrous tissue, very abundant, but seeming not to form areolæ for the cells. The walls of the abscesses were almost entirely composed of cells. I thought the growth a glioma of the auditory nerve. Dr. J. C. Warren was more inclined to look upon it as of inflammatory origin. According to my view, might it not have caused the abscess by pressure on nutritive vessels? According to Dr. Warren, it may have been the effect of the abscess.

The symptoms in this case show that both divisions of the fifth, the seventh, eighth and twelfth, and probably the eleventh nerves were affected. But there are also certain symptoms referable to other parts of the nervous system; loss of power in the limbs, and diminished eye-sight, and involuntary motions in the arm and head, and dizziness, with nausea and vomiting. By referring to page 102 of the last volume of this Journal, it will be seen that imperfect paralysis on the same side as the lesion, without loss of sensation, vertigo, and impairment of sight are mentioned, as assisting in the diagnosis of lesions causing irritation of the middle cerebellar peduncle.* All these symptoms were present in this case in addition to the symptoms connected with the cranial nerves.

Were the symptoms such that during life a lesion of the cerebellum might have been diagnosed?

"Tumor of the cerebellum is especially characterized by *headache*, especially in the *occipital* region, *motor disturbance* commonly in the form of *convulsions* and *difficulty in walking* and *standing*, in *convergent strabismus*, often also in *amblyopia*. The negative symptoms which are most prominent are want of *sensory disturbance* and of *paralysis*, as well as want of *disorders* of *intelligence* and of the *special senses*, excepting *sight*."

"The final symptoms of tumor of the cerebellum belong specially to a lesion of the medulla oblongata. Difficulty in swallowing, and disturbance of the respiration occur, which hasten death." (Ladame, Hirngeschwülste, p. 99.)

This is the shortest and clearest statement of the symptoms of tumors of the cerebellum I know of, and is the result of the analysis of seventy-seven cases. The negative symptoms do not correspond exactly, owing to the fact that other parts were affected by pressure, or by extension of the disease. Yet it would seem that in such a grouping of symptoms we should be justified in referring the disease to the cerebellum. The vertigo of which this patient complained might be found also in lesion of the pons, but I believe is rather more frequent in affection of the cerebellum.

The following, though perhaps an *ex post facto* explanation of the relations of the symptoms to the lesion, is yet of interest. The morbid growth commenced several years since in the auditory nerve, about the time the hearing was lost, it extended so as to implicate the facial nerve at the time when he noticed his inability to close his left eye; the growth of the mass had been slow; perhaps there would have been noticed a failure in the power of the facial previous to that time, if he had thought to inquire in regard to it. The partial loss of power in the left arm and leg was noticed about two months after the paralysis of the facial muscles, when the tumor had increased so as to press upon the middle cerebellar peduncle, and the root of the fifth nerve. Subsequently the symptoms increased rapidly in severity, for the nutrition of a portion of the cerebellum was interfered with and the abscess formed.

The next and last case is that of a woman seen at the City Hospital. Her case is given, not because the base of the brain was affected, but as the lesion was confined to the cord below the medulla, it will show the contrast between cases of spinal lesion high up, and cases of lesion of the base.

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* The tumor in this case must have pressed on the middle cerebellar peduncle, between the eighth and fifth nerves, and pressed on the root of the fifth nerve, the points where pressure, according to Brown-Séquard, is most likely to produce the reflex symptoms.

CASE VIII.—*Abnormal Sensation and Numbness, followed by Sense of Heat. Recurrence of Abnormal Sensations. Diminished Sensation on Right. Extension of Disease and Death.*

B. K., æt. 23. Had been exposed to wet just before the first attack. Usually not so exposed. Had never had occasion to lift heavy weights. Was never sick before except with headache.

Two or three years since she had pain first in right big toe, then over the whole body. A prickling, sleepy feeling arose in right foot, which extended in two days to the knee, and in two to four days more to the hip. This sleepy feeling ceased in a short time, and then a numbness extended up the legs to the hips, which lasted only a few weeks; she then recovered, except a subjective sensation of heat in the right limb as high as the hip. She could walk and move about well. This sense of heat continued till about eight weeks ago, and then the pain in the toe recurred. The pain was of an aching character, and continued till the occurrence of numbness a few days later. About three weeks ago occurred the sleepy feeling, a prickling, as if something was sticking in all the time.

This prickling extended up to the ninth rib, the numbness extended higher. The prickling was not in the upper limbs, except in the fingers at night. In the right arm was numbness, not so bad as in the leg.

About the middle of June the same sensations were experienced in the left big toe, and subsequently in a few days the prickling, without numbness. The prickling extended on the left as high as on the right. In the left arm there was numbness, but no pain.

A few weeks ago she had a trembling fit, as if cold, but was not cold.

The motion of the eyes is good, the pupils react well, the eyes open and shut naturally. The tongue is protruded straight, and the mouth is not drawn to one side.

The arms are irregularly mottled.

It hurts her feet to turn in bed. The temperature of the left leg seemed to the hand to be a little higher than the right; thermometer not used.

She was said to have stood unsteadily on either leg for several minutes. After being up a while she could not walk so well as at first.

The power of the left hand to grasp seemed less than that of the right. The power of the legs to push seemed equal. There was no difference in reflex action in the legs.

The following is the result of an examination of the sensation by the æsthesiometer.

Place	Distance at which 2 points were distinctly felt. mm.
Foot, right,	45
" left,	25
Below breast, right,	at 100 mm. only 1 point felt.
" " left,	at 100 mm. only 1 point felt.
Over " right,	20
" " left,	35
Neck, right,	15
" left,	20
Arm, inside above elbow, right,	22
" " left,	15
Arm, outside, right,	30
" " left,	25
Forearm, right,	25
" left,	15
Palm of hand, right,	10
" " left,	7

The left breast was tender to the touch from the application of mustard.

The hospital records mention subsequently the occurrence of trembling in the left arm; severe pain in the left wrist; increase of numbness and loss of power in both hands; disturbed by people walking; great sensitiveness to touch; flushing of face and mottled skin.

On July 29th, I again saw her. The fingers of the left hand were contracted, and there was no power of motion in that hand, nor in the legs. A slight touch did not cause pain in the feet, though it did in the face. On exposing the feet to cold air, cramps were caused in the toes and feet. The skin was much more mottled than when first seen.

July 30th, she died, and it was not possible to obtain an autopsy.

In this case the seat of the lesion was at first chiefly in the sensory tract. At first the motor tract was only slightly affected, but as the disease advanced this also was implicated. At first the disease was on the left side and in the lower cervical or upper dorsal region. Later it probably extended a little higher, and also crossed over to the other side. It will be noticed that none of the cranial nerves were affected; the lower ones, the hypoglossal and spinal accessory, acted normally. The lesion, as shown by the symptoms, was exclusively spinal, and was situated probably at the upper part of the cervical enlargement, involving the brachial plexus, but not all of the cervical plexus.

CRIMINAL ABORTION.*

Read at the Bristol North District Medical Society, by O. C. Turner, M.D., North Attleboro', Mass.

Mr. President and Gentlemen,—There is a subject which deserves the gravest consideration of medical men, and which pertains to the most vital interests of society, but which is, or appears to be, unthought of, or at least untalked of, in our meetings. There is an ever-deepening shadow creeping over the face of the land, like a destroying plague. There is a soul-staining crime which is corrupting the community, a flood undermining the very foundations of our civilization, and which demands our united efforts to resist and sweep back. Physicians, whose efforts should be put forth to save and prolong life, connive and assist in destroying it. Parents, whose natural and Heaven-given instincts should lead them to cherish their offspring and multiply their species, debase themselves far below the level of the brute creation, and for their temporary convenience stain their hands with blood and their souls with sin. Where the Asiatic cholera or any other dreaded pestilence takes one this takes ten, and for every hundred that consumption, that scourge of our race, demands, this Moloch receives a sacrifice of thousands. Legislators overlook it, or at least make no efficient attempt to stay its progress; the press and the pulpit are almost silent in regard to it, and so the carnival of death goes on unchecked. Gentlemen, you know to what I refer, the slaughter which outherods Herod, *Criminal Abortion*.

How can we account for the prevalent apathy in regard to this crime, and for its fearful increase?

In the first place, things are not called by their right names. In these days, when theft is called peculation, robbery of public funds financial irregularity, &c., how can we expect to recognize as murder that which is called simply "getting rid" of something, or being "helped" out of trouble? There are other reasons, such as unnatural and fashionable life, where children are regarded as hindrances; but I wish to confine myself to the professional side of the question, and to the motives which should actuate us, as members of the medical profession, in our actions.

I lay it down then as a starting point, that criminal abortion is murder. I think the destruction of the fœtus in the mother's womb is just as much a murder as if one should knock it on the head after its birth. The defender of the system* says, "There is no life in the fœtus until respiration is established after birth." I contend that there *is* life there. Why not? When does life begin? Not till the child is entirely separated from the mother? Suppose that the child respires and the cord pulsates before it is tied. Surely the child is alive then. It cannot be that the mere act of tying the cord produces life. Then when did life begin? With respiration? That is only one added function. There was circulation previously, and the power of nervous action and motion. Why is not a fœtus alive when it is diving and plunging in its mother's womb? Simply because its lungs are not inflated? Out on such nonsense! One might as well say that a child born blind was not alive because it did not use its eyes. It is on record, I believe, that children have been born by the Cæsarean section, after the death of the mother. If there was no vitality in the fœtus previous to respiration, then why was it not dead, like the mother? There can be no doubt of it; there *was* vitality or life. Then if we acknowledge that the fœtus has life, how can we say at what period of gestation that life commences? The period of quickening varies, and I do not see why a fœtus is not quite as much alive just before it moves as just after. I think the All-seeing Eye can discern the germ of vitality at the very beginning of gestation, and the fact that *we* cannot discern it so soon ought not to convince us that it is not there. I stand firm in the opinion that there is life in the minutest ovum, and the burden of proof rests with the one who denies it.

My next assertion is, that under *no* circumstances whatever is the procuring of abortion justifiable, except in cases where there is such deformity of the pelvis that a viable child cannot be born. Many of the cases of criminal abortion are young women or girls who have "got into a scrape," as it is elegantly termed, and come to a physician for help. I care not what may be the position or prospects of the girl. We have *no right* to commit the *great crime* of murder to save her from a just measure of disgrace. If every physician would refuse every such application, cases of disgrace might be frequent for a while, but the women would soon learn that an ounce of prevention is worth a pound of cure.

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* This communication was accompanied with the following note:—

Taunton, March 28, 1870.

Mr. Editor,—At the meeting of the Bristol North District Medical Society, Dr. O. C. Turner, of North Attleboro', read a paper on Criminal Abortion. The Society voted that the Secretary should send the same to the Editor of the Boston Medical and Surgical Journal for publication, and enclosed I send you the original copy.

Yours, &c., E. J. Bassett, M.D.,
Sec. Bristol No. Dist. Med. Society.

* We were not aware that any true physician defended the system.—Ed.

Dean Trench, in his work "On the Study of Words," says, "What a source of mischief in all our country parishes is the one practice of calling a child born out of wedlock a 'love-child,' instead of a bastard. It would be hard to estimate how much it has lowered the tone and standard of morality among us; or for how many young women it may have helped to make the downward way more sloping still." Then let "bastard" mean bastard. Let the erring ones understand that medical men cannot be used as cloaks for their sins, and cannot be hired to commit a crime for the sake of saving them from the consequences of their own.

This brings the next thought forward, that by helping women out of such difficulties, the physician invites and encourages them to continue in their sins. He says, in effect, "Go on; no matter if you do get into difficulty; I will help you out." How easy for the woman to think, "I didn't incur disgrace that time; I can try it again without much risk." After this, how easy is the repetition of the offence!

But by far the *larger* number of these cases are married women, who incur no disgrace by having children, but who simply don't want them. Then if it is unjustifiable to procure abortions for unmarried women, even with the object of saving them from disgrace, how much less justifiable is it to procure them for this class, and yet, how large a number of such cases we are constantly hearing of. I venture the assertion that there is not a gentleman present who has not, more or less frequently, been importuned to interfere in cases of this kind. Who can doubt that if, by the uprightness of physicians, it were impossible to procure an abortion, the number of demands for assistance would decrease, on account of the extra precautions which would be taken?

"But," says the professional murderer, "if I don't do this some one else will; and I may as well have the money as these quacks." Here is the prime reason of his strong desire to save people from disgrace. A member of the medical profession, in good standing apparently, and not unknown to all of us, told me that not a day passed that he did not procure an abortion for somebody, and perhaps more than one.* He used the above argument in justification, but what weight has it? None at all. There are villains whose occupation it is to rob and murder defenceless travellers. Shall we, as physicians, go into that line of business on the ground that we can cut their throats scientifically and bleed them to death easily? Why not murder in one way as well as in another? But there are physicians (gentlemen, do we know any of them?), whose principal business is this venal murder, to whom, by long practice, this crime has become so common as to excite no sensations of novelty or conscious guilt. What a condition of the moral faculties does this reveal!

But there is another consideration. If a physician procures an abortion, he not only kills one, but runs a risk of killing another, and very often his two victims rest in the grave together. How many are there of us who have not seen cases of this kind? Not many, I think. What is the effect of this? Does it not tend to make the physician reckless of human life? May he not say, "She wouldn't have died if I had let her alone, but no matter, no one can prove it." With the next one, "Well, that is only one more." And so what may we expect to find the character of the professional abortionist to be? I need not particularize on this point. They are in our very midst; we all know what they are. Unscrupulous, lecherous, adulterous perhaps (for we know that under certain circumstances, having a woman's secret at his disposal, the abortionist can make demands of her which she dare not refuse), ready to commit crime for a few dollars—why may we not suppose that he would be willing, for a small fee, to remove an aged parent from the path of an anxious heir, or perform any other crime which could be done easily and secretly?

Gentlemen, what can be done to remedy this state of things? The remedy rests with ourselves. Let us refuse, under any and all circumstances, to be accessory to the crime of which we have spoken. Let us discountenance any practitioner who persists in performing it. He is not worthy of recognition, either as a physician or a man. His manhood is blotted out since he has prostituted his medical knowledge to the service of crime.

In conclusion, I invite any man who has

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* We are astounded that any regular practitioner should have dared to make such a confession. We say, show him up, and let him be expelled from the Massachusetts Medical Society.—Ed.

a word of defence for this system, to speak it. If there is any man who can justify it, let us know in what manner. But let us all remember that for all deeds done and sins committed we are to be held to a strict account, that the All-seeing Eye is upon us, and justice will sooner or later overtake us.

BONN, IN RHENISH PRUSSIA.

By Dr. Hatton.

As many will soon be coming to Germany on the opening of Spring, I thought I would send a few lines to induce students to come to this city, which is pleasantly situated on the Rhine, surrounded by beautiful scenery and many objects of interest, containing a fine university, with every facility for study. There are good professors, a good laboratory, and every thing needed is furnished. Let the young man who expects to spend two or three years on the continent, spend one year here, learn the German language and French, and lay the foundation for foreign study. I give you a plan of study, which I suppose is similar to what is in the other German cities, and similar to what we have in America.

9, A.M.—Surgery, every day of the week.

10.45, A.M.—Internal diseases, every day of the week.

12, M.—Anatomy or midwifery, except Tuesdays and Fridays, when diseases of the eye.

3, P.M.—Lectures on different subjects in the University.

4, P.M.—Lectures on different subjects in the University.

There is a reading room of some 400 or 500 papers and pamphlets; a library of 200,500 books; and an anatomy building.

To the ophthalmic surgeon the following may be useful.

Eye Clinique in Bonn.—This is conducted by Prof. Soemish, assisted by Dr. Sniewind. At 9, the patients begin to arrive. To the left is the door of the waiting room; in front, the room where the clinique is held. At 9.30, the doctor visits the patients in a branch infirmary, in an adjoining street. At 10, the clinique is held at the Professor's house; one half is used as his dwelling, and the other for the patients. The patients enter. Copper sulph., mercurial preparation, atropine, caustic—mild or strong, calabar bean, is applied according to the necessity of the case.

A small, dark room, with a gas-burner, is used for the ophthalmoscope. The tear passage is slit up, before the probe is passed. Graefe's operation is employed for cataract. A flannel or worked bandage is used. The process of dipping a child's head is also employed (but I think Dr. Williams's employment of tact much the best)—a basin of water—the child's head dumped in once or twice—the face dripping—chair and floor covered with water—clothes splashed—the child, frightened, opens its eyes—and the case is made out. The plan of treatment is the same here as in Berlin and Vienna, and I perceive little difference from the Boston treatment of diseases of the eye.

Bibliographical Notices.

The Preventive Obstacle, or Conjugal Onanism. The Dangers and Inconveniences to the Individual, to the Family and to Society of Frauds in the accomplishment of the Generative Functions. By L. F. E. Bergeret, Physician-in-chief to the Arbois Hospital (Jura). Translated from the Third French Edition, by P. De Marmon, M.D. New York: Turner & Mignard, Printers and Publishers, 109 Nassau St. 1870. 18mo. Pp. 182.

The *a priori* argument in favor of the theory that onanism and the various other forms of incomplete sexual intercourse are injurious, is not impaired by this book. But we came to its reading with the hope that the theory in question would be substantiated by M. Bergeret's facts. We have been disappointed. The cases cited show, for the most part, nothing more than mere coincidences, and sometimes prove too much. The latter effect is produced when scirrhus and other forms of cancer are traced to the so-called frauds, or to abortive sexual excitement. In some of the instances, too, excessive indulgence was apparently the cause of disordered health. There is no grouping of large numbers of cases of inflammation of the generative organs, of impotence, of nervous exhaustion, so as to show that a majority of these cases were associated with the practices in question; and we are not furnished with statistics to indicate that in communities where these practises are most common, there is special prevalence of the disorders assumed to have a causative relation with them.

That the "preventive obstacle" does

not always eliminate impregnation is, however, illustrated in the pages of the book before us.

A Practical Guide to the Study of the Diseases of the Eye: their Medical and Surgical Treatment. By Henry W. Williams, A.M., M.D., &c. &c. Third edition, revised and enlarged.

That the profession appreciate Dr. Williams's efforts to give them a practical treatise on diseases of the eye, is sufficiently attested by the fact that two editions of the work have been exhausted during a period when the market has been flooded with well written books bearing like titles. So little time has elapsed since the publication of the second edition, that the third is presented, with the exception of a few verbal alterations, without change.

A Practical Treatise on the Diagnosis, Pathology and Treatment of Diseases of the Heart. By Austin Flint, M.D., Professor of the Principles and Practice of Medicine, and of Clinical Medicine, in the Bellevue Hospital Medical College, &c. Second Edition, thoroughly revised and enlarged. Philadelphia: Henry C. Lea. 1870. 8vo. Pp. 550.

We copy the preface to the Second Edition:—

"In revising this treatise for the second edition, the author has endeavored to incorporate the results of the study of the diseases of the heart during the ten years which have elapsed since the appearance of the work. Many additions and alterations have been made, and much has been rewritten. An analysis of about four hundred and fifty cases, recorded by the author during the period just stated, has served as the basis of the revision.

Test for Arsenic.—A new and very delicate test for arsenic has been discovered by Bettendorf. Its sensibility is so great that it is said to be capable of detecting one part of arsenic in a million parts of solution; and the presence of antimony does not affect it. In order to apply this test, the arsenious, or arsenic liquid is mixed with aqueous hydro-chloride (hydrochloric acid), until fumes are apparent; thereupon stannous chloride is added, which produces a basic precipitate, containing the greater part of the arsenic as metal mixed with stannic oxide.—*Medical and Surgical Reporter.*

Medical and Surgical Journal.

Boston: Thursday, April 21, 1870.

We have received a pamphlet entitled, "Correspondence concerning a Fatal Case of Placenta Prævia, prepared by Charles E. Buckingham, M.D., Professor of Midwifery and Medical Jurisprudence in Harvard University, and printed for the benefit of the Profession." The preface we quote entire.

"This correspondence is published for the benefit of the medical profession, and more especially for the benefit of those who are led to express opinions formed upon insufficient data.

"It originated in a fatal case of Placenta Prævia. The cause of death was the general shock to the nervous system of a patient, attended by one unknown to her up to the hour of labor, and who was obliged by circumstances to announce to her the danger of her symptoms and the necessity of interference.

"Certain expressions in one or more of the letters might lead readers to suppose that the patient was left too early by her attendant. From the beginning of the attendance, however, until after death took place, at least two physicians* were in the room; and there was no time when one or the other was not compressing the uterus.

"The fact *that ice was not used* in treating the hæmorrhage, led some physician ignorant of the facts to comment upon the treatment of the case, and, either thoughtlessly or maliciously, to disturb the relations existing between the first two parties in the correspondence.

"A portion of these letters having been read by Mr. Barnard to patients of mine, it was my intention, if possible, to find out the parties to whom he had given accounts of the case, and to hold them responsible for the statements said to have been made by them.

"There was but one, however, who could be identified, and he denies Mr. Barnard's statements entirely, as will be seen by his letter.† Who may be the New York Professor spoken of, if such exist, I have no means of discovering; unless this document may, perchance, fall in his way, and lead him to say voluntarily whether he has written upon the subject, and what.

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* Dr Charles E. Swan was with me all the time, and just before death took place, Dr. B. E. Cotting arrived.

† The reader will please compare the passage on page 17, line 6, beginning with, "I got the opinion, &c.," and ending "has honored you," on the same page, with letters XIX., XX., and XXI.

"The conclusions finally arrived at were as follows, viz. :—

"1st. That the treatment of the case having been what I considered correct, there is no reason, on my part, for preventing publicity.

"2d. That not fearing publicity, there is no reason why the husband should have put upon him all the burden of telling the story.

"3d. That whereas no one, except myself and the medical gentlemen who were with me, knows what the treatment was, further than that *no ice* was used ; of course, no one except ourselves can tell whether the treatment was correct or not.

"4th. That putting these letters into the hands of the younger members of the profession, may teach some of them the absurdity of commenting upon the treatment of cases of brother practitioners, as told by non-professional men who saw the cases, or by professional men who did not.

"CHARLES E. BUCKINGHAM,
"53 *Worcester Street, Boston.*"

The bulk of the pamphlet consists of a correspondence between Dr. Buckingham and Mr. Barnard, the husband of the unfortunate lady referred to, who died in consequence of placenta prævia. The basis of the discussion was the suspicion entertained by Mr. Barnard that "many of the means usually employed in such cases had been omitted in this."

Dr. Buckingham, at the first recorded interview with Mr. Barnard, inferred from the tone and character of the questions put to him, that the latter gentleman had been tampered with by some one; and consequently soon became very reserved, avoiding reply to interrogatories until the suspected *arrière pensée* should be discovered. In Letter No. V., the Doctor says to Mr. Barnard :—

"I fully believe that your suspicion and resentment, which must be as painful to you as it is unjust to me, are not spontaneous, but have been instilled by some person who is actuated by some most wicked purpose, either towards you or towards myself."

The predominant feeling toward Mr. Barnard which is awakened by reading the correspondence, is one of compassion at the grief which seems to have rendered him almost beside himself. It was natural that he should desire to know if everything had been done for his wife, so suddenly lost to him ; and if in a transport of mental agony he brought against his physician the dreadful charge of having been the cause of Mrs. Barnard's death, that was something to be forgiven as soon as the accusation should be withdrawn. But, it would have been idle to describe and defend the treatment to him alone, as a non-professional person would be in no way competent to judge of its appropriateness. Accordingly we find Dr. Buckingham saying, in letter No. V. :—

"I therefore renew the proposal contained in my letter of the 26th inst., that I have quoted ; but always upon the condition, that you entirely and explicitly retract the accusation that you have made of neglect or malpractice. I shall never condescend to defend myself against that charge before any other than a legal tribunal, and certainly I shall not answer the questions of any unknown inquisitor."

The proposal alluded to in the foregoing passage was as follows :—

"I shall answer the questions put by you in writing, being with you at the time, so that any misunderstanding of question or answer may be corrected upon the spot.

"I claim, however, that there shall be present, also, a medical gentleman, selected by each of us, to whom any question or answer *may* be referred to judge of its fairness. Neither of us shall select a physician who may be objected to by the other. Should you accede to this proposition, I leave it to you to make the first selection. With the desire for investigation, and the belief that you will be satisfied with the result, I am, very respectfully yours,

"CHARLES E. BUCKINGHAM."

The science, experience and skill of Dr. Buckingham as a practitioner of medicine are above question in this community. In his specialty of midwifery, he ranks as an authority ; and his thoroughness in the practice of it, together with his devotion to his patients, are unsurpassed by none—equalled by few. Though no one but Dr. Buckingham and the medical gentlemen who assisted him in the case of Mrs. Barnard knows what the treatment was, we feel perfectly assured that no feasible measure for her safety and comfort was omitted or for an instant remitted. For him, therefore, to describe that treatment now, would obviously be to divert attention from the main points in the case—the personal relations of the interlocutors, known and unknown—and would render the essentials of the controversy liable to be lost sight of in the discussion of side issues. But, we hope that when the proper time shall have come, Dr. Buckingham will see fit to lay before the profession a description of the conditions and course of the case, together with its treatment; because we are fully confident that his skill and faithfulness will thus be completely vindicated to the judgment of all medical men, as it is now trusted in by those who know him.

We now give the passage to which attention is specially invited in the note to the preface—the letters referred to—and also those with which the correspondence concludes.

"I got the opinion of many physicians; but they only augmented my torture—for *all* expressed surprise that nothing more had been done for the salvation of *the* life which was of consequence to me; and informed me what they should have done in a similar case. From what you have said to me, I know you would like the names of the physicians, that you might pronounce a judgment upon their eminence and their fitness. I will only say this; they were those whom Harvard University has not only honored with degrees, but among them there was one, whom this same University has honored with an appointment as Professor equal in distinction to that with which she has honored you."

No. XIX.

"My Dear Sir,—In the case of Mrs. Barnard, to which you refer, so far as I *know from the account of her husband,* I could not judge of the appropriateness of the treatment—I could form no opinion and of course could express none.

"From *your account* of the case, I should judge you had endeavored faithfully to discharge your duty.

"Yours truly, D. Humphreys Storer.
"*Jan.* 20, 1870."

"No. xviii. and No. xix. were enclosed in the following letter, No. xx., to Mr. Barnard, whose answer, and the remainder of the correspondence, are left without comment."

No. XX.

"Boston, Jan. 28th, 1870.

"My Dear Sir,—Should you see fit to read a part or the whole of our correspondence to any more patients of mine, will you oblige me by reading also the enclosed copies as an appendix.

"Respectfully yours,
"Charles E. Buckingham.
"*D. Barnard, Esq.*"

No. XXI.

"Boston, Feb. 2d, 1870.
"*Dr. C. E. Buckingham.*

"Dear Sir,—Yours of January 28th, enclosing copies of several letters, has been received.

"In one of them your correspondent says, 'From *your account* of the case, I should judge you had endeavored faithfully to discharge your duty.'

"Will you please inform me what '*your account* of the case' was?

"Respectfully yours, D. Barnard."

No. XXII.

"Boston, Jan. 22d, 1870.
"*D. H. Storer, M.D.*

"My Dear Sir,—Your note of Jan. 20th, in reply to mine of the 19th, was received, and I thank you for it.

"The case has been repeatedly reported, as I understand, by Mr. Barnard, and the opinions of other physicians concerning the treatment of the case have been largely quoted, but without my being able to obtain their names. It has been suggested, that the entire correspondence should be printed for distribution in the profession, as a means of finding out who has been consulted, and if others have been quoted falsely as well as yourself.

"Should you desire to make any change in your notes before printing? I ask this, because you speak in your last note of '*Your* (*my*) *account of the case,*' and I believe I have given you no account of the treatment.

"I am, very respectfully, yours,
"Charles E. Buckingham."

No. XXIII.

"Dear Sir,—I am not a little surprised that you should say, 'you had given me no account of the treatment.' If you had not done so, how could I say '*I thought you had discharged your duty?* You must excuse me from hearing any more upon this subject. Respectfully,

"D. H. Storer.
"*Boston, Jan.* 24, 1870."

CORRECTION ADDRESSED TO THE *UNION MEDICALE*.

A *feuilletoniste* in that valuable journal has misinterpreted our vernacular. He says that in Boston "these deaths from chloroform are cited to the discredit of the great discovery of anæsthesia, just as deaths from variola are made an argument against the utility of vaccination." (*Ces morts par le chloroforme sont exploitées contre la grande decouverte de l'anesthesie comme les morts par le variole contre la vaccine.*) It is precisely this blending the discovery of anæsthesia with the application of chloroform to anæsthetic purposes against which we are protesting. It is *etherization* which should *par excellence* be used to designate the "discovery of anæsthesia," because it was with the inhalation of sulphuric ether that anæsthetics were first introduced into the general practice of surgery. On the other hand, it is the production of anæsthesia by *chloroform* that we would banish from civil practice. The benefits of anæsthesia by *sulphuric ether* we zealously maintain and proclaim; and we point with pride to Boston as the birthplace of that form of anæsthetic inhalation to which scientific scrutiny has assigned not a single victim; all false accusations to the contrary notwithstanding. *Hinc illæ lacrimæ!*

Our French friends seem to find the English language very difficult of translation when ether is concerned. Does that agent specially affect the portion of the brain which has been supposed to be the seat of aphasia?

ADMISSION OF COLORED DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.—Our distant neighbor, the Editor of the Richmond and Louisville *Medical Journal*, rebukes the other Medical Journals of the country for not having spoken out on the subject of admitting colored delegates to the meetings of the American Medical Association. Dr. Gaillard states his own views to the effect that it would be right to grant such admission, but that it would not be expedient; for that it would cause a disruption of the Association.

We hardly think medical editors are called upon to sound a blast upon the subject. Our publications are not in the position of political organs, and we should avoid the appearance of dictating to any of our associations. But, as our cotemporary has summoned us to speak, we are quite willing to present our opinion for what it may be worth.

We hold that it would be wrong to refuse the admission of colored delegates to seats in the convention of the American Medical Association, and that what is wrong is inexpedient.

Further, the exclusion advocated by our brother Editor would disqualify, render ineligible as delegate, at least one colored physician who wore the uniform of the United States in the late war of the rebellion. There is one such now practising in the place of the approaching meeting of the Association, who was a Medical Director in the service of the Government which holds its seat in the District of Columbia. We can see no consistency or propriety in imposing a *civil disability* on him, by the votes of those who sustained the integrity of the nation during the last decade. We forbear to make the antithesis.

If the American Medical Association can be rent in twain by such an issue of a past controversy as this, then it is not worth preserving. If the question comes up, we trust that it will be squarely met; and that Union men will show that though they can forgive their enemies, they do not forget their friends.

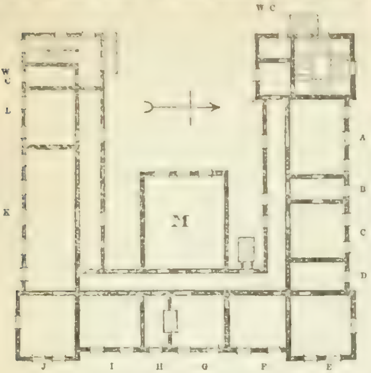
A matter, however, so fraught with possible consequences of moment, had better be, so far as practicable, quietly ignored. "Let the dead past bury its dead!"

LEIPZIG, March 8th, 1870.

MR. EDITOR,—Thinking it may interest your readers to hear something of the way in which physiology is studied and taught at Leipzig, I venture to ask a place in your columns for the following communication.

Leipzig is a city very little visited by American medical men, for whom the larger cities, such as Berlin and Vienna, offer in general greater attractions in their superior opportunities for clinical observation. The student of physiology and chemistry, however, finds here facilities for prosecuting his studies which are not surpassed in any city in Germany.

The physiological laboratory, where I am at present working, owes its existence to the energy of Prof. Carl Ludwig and to the liberality of the government of Saxony. As it is universally acknowledged to be the most complete establishment of the kind in Europe, it seems to me to merit a somewhat detailed description. The building, as may be seen by the annexed plan, has somewhat the form of a horseshoe, with a small, projecting portion in the middle, where the lecture-room is situated. The dimensions are—on the north and south sides, 119 feet 2 inches; on the east side, 121 feet 11 inches. The right wing of the building constitutes the microscopical department, the left the chemical department of the laboratory, while the central portion is devoted to the study of experimental physiology in the narrower sense of the word.



To describe the rooms more minutely. Room A is arranged for the accommodation of beginners in the study of microscopy, and is furnished with boxes to contain the microscopes, and a large ground-glass tablet, by means of which the lectures on microscopy are illustrated with drawings in colored chalk. Room B is the private study of the assistant in microscopy. Room C is intended for more advanced students in microscopy, and contains an injecting apparatus, by means of which three different fluids can be injected simultaneously under any required pressure and for any length of time, while the injection mass and the tissue to be injected are heated over a water bath. Room D contains a small library, consisting of such books as are most needed for constant reference. Room E is furnished with glass cases, in which physiological apparatus is kept when not in use. As a rule, no experiments are performed in this room. Rooms F, G and H are devoted to experimental physiology, and are furnished with operating tables, with bellows attached for keeping up artificial respiration on *curarized* animals, registering apparatus of various sorts for recording the pressure of the blood, water baths where any required temperature may be kept up indefinitely, an injecting apparatus like that in the microscopical department, evaporating closets, glass cases for apparatus, &c. Between rooms G and H is a small closet arranged for observations with the spectroscope. Room I is the chamber where all experiments are performed which require the use of large quantities of quicksilver. It contains two quicksilver pumps for extracting gases from fluids, instruments for measuring the activity of the respiration in man and the lower animals, &c. Room J is divided into two portions, one of which is used for a weighing room and the other for experiments in acoustics. Rooms K and L contain, besides the ordinary furniture of chemical laboratories, the ingenious air pump of Bunsen, by which the process of filtering is so greatly accelerated. The lecture room, M, accommodates about one hundred students. Tables running on a small railroad in front of the seats, enable the lecturer to demonstrate his experiments very considerably. The room is lighted from above as well as from the side, and if necessary, can be darkened completely, for optical experiments.

In the basement of the building is a small gas-engine of about one-horse power, which drives the respiration apparatus, registering instruments, &c. In the basement are also the rooms where the animals are kept (one room being devoted entirely to frogs), a chamber furnished with refrigerators for performing chemical experiments, where a low temperature is required, a chamber containing furnaces for fusion, a work-shop, store-rooms, &c.

The second story of the building contains the rooms of Prof. Ludwig and his family, and those of other persons connected with the laboratory. In the court-yard is a small building containing the necessary arrangements for experimenting on horses and other large animals. Here, also, are an aviary and a small fish-pond.

Besides the permanent and stationary apparatus already described, the laboratory is well supplied with all sorts of instruments for physiological experiments, and new apparatus is constantly ordered for special investigations. There is also a very skilful mechanic living in the laboratory, whose duty it is to make alterations or repairs in the apparatus as circumstances may require.

Prof. Ludwig directs personally all the work done in the laboratory, devoting his whole time to the superintendence of his pupils, and making no independent investigations. Each of the pupils, at present nine in number, makes, under the direction of the Professor, a series of experiments with a view of settling some special point in physiology. The results arrived at are published at the end of the year, sometimes under the names of the Professor and pupil together, and sometimes under that of the pupil alone. The whole work of the laboratory forms every year a pamphlet of 150 to 250 pages.

Prof. Ludwig lectures five times a week on physiology, and his assistant, viz., Prof. Schweigger-Seidel, in microscopy, Dr. Hufner in chemistry, and Dr. J. J. Müller in physics, also lecture on their specialties, besides superintending the work done in their respective departments.

It will thus be seen that abundant facilities are here offered, not only for learning the existing state of physiological science, but also for becoming familiar with the manner in which physiology is at present studied in Germany. The patient, methodical and faithful way in which the phenomena of life are investigated by the German physiologists not only inspires great confidence in their results, but encourages one in the hope that the day is not far distant when physiology will take its proper place as the only true foundation of medical science. H. P. Bowditch.

Record of Mortality in Berlin for December, 1869. (Translated for this Journal by S. G. Webber, M.D.)—Births, 1357 boys, 1308 girls; total, 2615, of which 222 boys and 196 girls were illegitimate. 33 times there were twins and three times triplets.

660 couple were married.

Deaths 1771 (906 males, 865 females). Under 1 year, 660; between 1 and 5 years, 307; between 5 and 10 years 41; between 10 and 15 years, 16; between 15 and 20 years, 37; between 20 and 40 years, 255; between 40 and 60 years, 207; between 60 and 80 years, 205; betw. 80 and 90 years, 32; betw. 90 and 100 years, 6;—under 15 yrs., 1024; above 15 yrs., 742;—age unkn., 5.

Cause of death.—Born dead, 80 m., 63 f.; lack of vitality after birth, 32 m., 25 f.; congenital malformation, 2 f.; old age, 27 m., 47.; suicide, 22 m., 5 f.; accident, 17 m., 6 f.; puerperal eclampsia, 3 f.; flooding, 3 f.; puerperal fever 15 f.; diarrhœa, 1 m., 1 f.; smallpox, 7 m., 8 f.; scarlatina, 6 m., 6 f.; measles, 22 m., 21 f.; pemphigus (blasenausschlag), 1 f.; thrush, 1 m., 1 f.; whooping cough, 5 m., 18 f.; gastro-nervous fev. and typhus, 20 m., 21 f.; purpura, 1 f.; catarrhal fev., 9 m., 5 f.; rheumatism, 1 m., 1 f.; erysipelas, 6 m., 6 f.; induration of cellular tissue, 2 m., 2 f.; diarrhœa and diarr. with vomiting of children, 20 m., 21 f.; inflam. of the brain, 32 m., 24 f.; gangrenous croup (diphtheria), 28 m., 34 f.; membranous croup, 12 m., 14 f.; quinsy, 1 m., 1f.; inflam. of air passages, 37 m., 32 f.; inflam. of the pleura and the lungs, 43 m., 52 f.; of the heart 1 f.; of the stomach and intestines, 2 m.; of the peritoneum, 1 f.; of the liver, 1 m.; of the urinary organs, 5 m., 3 f.; of the abdomen without specifying the organ, 4 m., 9 f.; organic disease of the brain, 12 m., 8 f.; of the spinal cord, 2 m., 1 f.; of the heart, 19 m., 19 f.; of the lungs, 9 m., 9 f.; of the liver, 2 m., 3 f.; of the stomach and intestines, 7 m., 7 f.; of the abdomen without stating the organ, 5 m., 2 f.; dropsy in the chest, 1 f.; abdominal dropsy, 1 f.; ovarian dropsy, 1 f.; general dropsy, 13 m., 10 f.; Bright's disease, 3 m., 4 f.; syphilis, 3 f.; scrofula and rachitis, 3 m., 1 f.; tubercle of the brain, 2 f.; laryngeal and pulmonary phthisis, 146 m., 119 f.; intestinal phthisis, 2 f.; chronic skin disease, 1 f.; cancer of the stomach, 4 m., 3 f.; of the liver, 2 m.; of the breast, 1 f.; of the nose, 1 m.; of the uterus, 7 f.; of the ovary, 1 f.; of the abdomen, 1 f.; of part not mentioned, 3 m., 1 f.; tetanus, 20 m., 8 f.; spasm of the glottis, 4 m.; epilepsy, 1 m., 1 f.; eclampsia of children, 69 m., 61 f.; cerebral apoplexy, 27 m., 30 f.; pulmonary and cardiac apoplexy, 8 m., 20 f.; caries and necrosis, 1 m., 1 f.; strangulated hernia, 2 m., 3 f.; carbuncle, 1 m.; noma, 1 m.; suppuration of cellular tissue and glands, 3 m., 1 f.; senile gangrene, 1 f.; inflammation of the umbilicus, 1 m.; fatal termination of surgical operation, 2 m., 2 f.; other surgical diseases, 4 m., 4 f.; marasmus, 48 m., 39 f.; paralysis of the lungs, 20 m., 23 f.; teething, 6 m., 6 f.; unknown, 11 m., 6 f.

Total, 906 m., 865 f.—*Berliner Klinische Wochenschrift,* March 14, 1870.

DEATHS FROM CHLOROFORM.

"At Accrington, on Saturday week, a young woman aged 30, named Susanna Horsfall, went to Dr. Millar's surgery to have some teeth extracted. The teeth were difficult to extract, and chloroform was administered. After having pulled out the third tooth, Dr. Millar observed that the patient was dying; and life was soon extinct. She had had chloroform a week before, but it did not take effect."—*British Medical Journal, April* 2, 1870.

Medical Miscellany.

WE invite the attention of our readers to the communication—published in the daily papers—of the Consulting Physicians of Boston to the City Government.

DR. WILLIAM INGALLS has been appointed Surgeon to the Boston City Hospital, *vice* Dr. George Derby resigned.

BOSTON DISPENSARY.—Drs. Samuel W. Langmaid, David F. Lincoln and Clarence J. Blake, have been appointed respectively surgeon, physician and aurist, at the Central Office of this institution.

AT a recent meeting of the Suffolk District Medical Society the following officers were elected for the year 1870–71:—*President*, George C. Shattuck. *Vice President*, G. H. Lyman. *Secretary*, D. H. Hayden. *Treasurer*, A. B. Hall. *Librarian*, B. Joy Jeffries. *Commissioner on Trials*, George Derby. *Committee of Supervision*, G. H. Gay, F. H. Gray. *Committee on Social Meetings*, James Ayer, Calvin Stevens, Henry I. Bowditch, C. D. Homans, F. B. Greenough. *Councillors*, S. L. Abbot, J. Ayer, J. Bigelow, H. J. Bigelow, H. I. Bowditch, B. Brown, C. E. Buckingham, S. Cabot, H. G. Clark, P. M. Crane, C. Ellis, J. Flint, J. B. Forsyth, G. H. Gay, A. B. Hall, G. Hayward, R. M. Hodges, C. D. Homans, Wm. Ingalls, J. B. S. Jackson, G. S. Jones, J. S. Jones, G. H. Lyman, F. Minot, W. W. Morland, S. Morrill, E. Palmer, C. G. Putnam, Wm. Reed, G. C. Shattuck, D. H. Storer, D. McB. Thaxter, C. E. Ware, H. W. Williams, W. G. Wheeler. *Censors*, G. H. Lyman, B. Joy Jeffries, H. F. Damon, A. D. Sinclair, Hall Curtis.

PHTHISIS IN MELBOURNE.—The Melbourne *Age* for January 29th complains of the practice in vogue in Great Britain of sending consumptive patients to die in Victoria, in the vain hope that the warm dry climate will restore health. The *Age* gives some ugly facts as to the prevalence of phthisis in the colony."—*British Medical Journal, Apr.*, 1870.

JUTE.—A new and rather singular feature in the sales of last week at Liverpool was the purchase of a hundred bales of jute for shipment to America, for the purpose of being dyed and sold as "ladies' back hair." There were other orders for the same purpose.—*Ibid.*

BENEFITS OF GOOD SEWERAGE.—Any one who is skeptical about the practical benefits of hygienic measures should go to Leek, in Staffordshire, England, and be converted. Sewerage works have been in existence for the last nine years in that town; and during this time the annual rate of mortality has decreased from 29 to 24 per 1,000, and the average age of the dead has increased by nearly one-third. If there be no sources of fallacy in the calculations, these facts give a proof of the good results of efficient sewerage as instructive to us as it is important to the inhabitants of Leek.—*Medical and Surgical Reporter.*

PROTECTION OF LEAD WATER PIPES.—Dr. Schwarz, of Breslau, notes a simple method of protecting lead pipes from the action of water, by forming on the inside surface of the pipes an insoluble sulphide of lead. The operation, which is a very simple one, consists in filling the pipes with a warm and concentrated solution of sulphide of potassium or sodium; the solution is left in contact with the lead for about fifteen minutes.—*Medical and Surgical Reporter.*

THE House naval committee is ready to report its bill for the re-organization of the navy. The relations of line and staff officers are placed on the same footing as in the army.

SMALLPOX is still epidemic at Paris. One hundred and twelve deaths are recorded from it in the week before last. We repeat our advice that some of the Dublin gentlemen conversant with the details of vaccination in that city should write and tender their experience to our Parisian brethren.—*Dublin Medical Press and Circular.*

ADDENDUM.—*Ichthyocolla* [illegible] *Spaldingum.* The *orthography* "Icthyocollæ," in our last issue, is the latest innovation.

TO CORRESPONDENTS.—Communications accepted:—Sudden Death Post Partum.

MARRIED.—In this city (Dorchester District), 14th inst., Hugh Doherty, M.D., of Boston, to Miss Emily A. Hazlewood, of West Roxbury.

Deaths in fourteen Cities and Towns of Massachusetts for the week ending April 16, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases	
		Consumption.	Pneumonia.
Boston	110	27	8
Charlestown .	8	2	1
Worcester . .	9	1	3
Lowell	10	2	0
Milford	6	2	2
Chelsea	1	0	0
Cambridge . .	7	1	0
Salem	9	3	0
Lawrence	9	2	0
Springfield . .	6	0	2
Lynn	5	0	0
Fitchburg . . .	3	0	1
Newburyport .	3	2	0
Fall River . .	7	0	1
	193	42	18

All the above-named places report eight deaths from typhoid fever, five from measles, six from croup and diphtheria, and three from scarlet fever.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending April 16th, 110. Males, 62—Females, 48.—Accident, 2—anæmia, 1—aneurism, 1—apoplexy, 2—inflammation of the bowels, 2—congestion of the brain, 1—disease of do., 2—inflammation of do., 2—bronchitis, 3—cholera infantum, 3—consumption, 27—convulsions, 1—croup, 1—debility, 1—diphtheria, 2—dropsy, 1—dropsy of the brain, 3—drowned, 1—scarlet fever, 2—typhoid fever, 5—gastritis, 3—disease of the heart, 5—homicide, 1—infantile disease, 4—disease of the kidneys, 5—congestion of the lungs, 2—inflammation of the lungs, 6—marasmus, 4—measles, 3—old age, 1—paralysis, 2—premature birth, 1—pyæmia, 1—scrofula, 2—suicide, 1—unknown, 6.

Under 5 years of age, 38—between 5 and 20 years, 5—between 20 and 40 years, 26—between 40 and 60 years, 25—above 60 years, 16. Born in the United States, 70—Ireland, 29—other places, 11.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

OVARIOTOMY.

Some new Features in the Operation as Illustrated in the Practice of Dr. Gilman Kimball, of Lowell. Two Cases.

By Alfred Hitchcock, M.D., Fitchburg, Mass. Read before the Worcester North District Medical Society, Jan. 8th, 1870, and published by Vote of the Society.

The success which a few American and European surgeons have attained within a few years in the removal of ovarian tumors, has already well nigh silenced censorious criticism and elevated the operation, in judiciously selected cases, above the level of doubtful expediency, to that of relative *safety* and *utility*, as compared with other capital cases in surgery which the profession have long unanimously approved and practised. That the specialist in this operation who already numbers his cases by the hundred should be more successful than a tyro is not surprising. If the operator is a man of science, of ingenuity, of ready and inexhaustible resource, and is withal imbued with a conscientious enthusiasm in this speciality, it gives the patient a moral courage and support which vastly increases the chances of recovery. A large personal experience also not only gives the surgeon *deftness* in this operation, but greatly intensifies courage in the mind of the patient; and thus, both influences, as statistics show, increase the per cent. of recoveries.

In the two cases among my own patients, which I report to-day, there are some new practical features, which I do not remember to have seen published, that seemed to me to be of great value. I refer to the deep sutures for compressing the bleeding peritoneal surfaces from which the adherent tumor has been necessarily detached.

Case I.—Hannah McGowan, age 28. Irish, servant, unmarried. For three years had suffered from ovarian tumor, which pretty steadily increased in size, attended by frequently recurring attacks of vomiting, with pain and tenderness over the abdomen of a distressing and exhausting character. For a year or more she had been unable to labor and was in despair of recovery, and besought her friends "to send her back to Ireland to die." Having the girl's entire confidence, as well as that of her priest, I advised her to submit to ovariotomy, by Dr. Kimball of Lowell, if on examination he feared no overruling obstacles in the case. To this advice, after some vacillation, she assented; and accordingly, a large, well-lighted and well-ventilated room having been secured, on the 17th of May, 1869, the operation was performed by Dr. Kimball, in the presence of seven Fellows of this Society, who rendered him the necessary assistance.

The incision through the parietes at the linea alba brought the tumor to view, with extensive and pretty firm adhesions of the whole front of the sac to the abdominal walls, involving also the omentum. After puncturing the cyst and drawing off with a syphon about twenty-five pounds of thick albuminous fluid, the sac and omentum were forcibly detached from the peritoneal surface of the abdomen, leaving it rough and abraded, provoking a slight but persistent hæmorrhage. This broken surface of the peritoneum extended from the epigastrium to the pubes, and was from two to four inches in width on each side of the mesial line. The sac was now readily turned out, and the pedicle cut off after being secured by strong ligatures which were drawn out at the bottom of the incision. The ragged and bleeding portions of omentum were cut away, and their margins secured by ligatures, which were ultimately brought to the surface near the upper part of the incision. After clearing the abdominal cavity, it was found that a small and troublesome oozing of blood continued from the rough and abraded peritoneum. Very gentle compression at any one point would arrest it; and, acting on this fact, as in some former cases, the doctor at once everted the edges of the wound, and brought the whole of the two sides of the abraded peritoneal surfaces together and had them firmly held by assistants, till he transfixed them with long needles and double ligatures at three different points, each about three inches from the margin, making the long *quilled suture*, which at once permanently held together and securely compressed the bleeding surfaces. The superficial sutures through the skin and cellular tissue were then applied; and a light dry compress, a few broad adhesive strips, and a flannel roller completed the dressings. Half a grain of morphine was given hypodermically before the effects of etherization had fully passed off.

There was no shock from the operation, and the patient rallied well as soon as anæsthesia passed off. The next day vomiting occurred a few times, but it subsided under the use of ammonia, and occasional quarter-grain doses of morphia. She had no chill, no tympanitis and no very marked symptoms during convalescence. The urine was drawn by catheter about four times daily for a week, and the rectal tube from time to time relieved the bowels of flatus. The deep sutures were removed the third day, and the superficial sutures on the tenth day. The ligatures from the omentum came away on the ninth day, and from the pedicle on the fourteenth. The bowels moved on the twelfth day, and in three weeks from the operation the patient was able to walk about the house, and was allowed full diet. In two months after the operation she found a "place," and has continued at service and in good health ever since. She is now in ruddy and joyous health, and is a fine specimen of what the science and art of surgery can do for a case, otherwise inevitably fatal, "to give life more abundantly" to a perishing human being.

Case II.—Mrs. J. T., of East Princeton, aged 30—mother of one child 3 years old. Ovarian tumor of two years' growth. Has rapidly increased in size since April last, attended, as in Case I., with frequently recurring circumscribed peritonitis, pain, dyspnœa and increasing debility. On the 7th of October last, by the advice of Dr. Miller, I introduced an exploring trocar and drew off twelve pounds of the characteristic ovarian fluid, but with very little subsidence of the tumor. This, with other facts in the case, led to the inference that the tumor was polycystic. In about six weeks, the tumor having steadily increased in size, discomfort and danger, I advised the operation for its removal. Accordingly, on the 22d of Nov., 1869, it was performed by Dr. Kimball, assisted by five Fellows of the Society. The tumor was polycystic and weighed fifty pounds. It was more extensively adherent than in Case I., and its separation was a more tedious and intrinsic process, although the several steps of the operation were the same.

The deep sutures were found equally necessary and useful in securing the loose parietes from which the sac had been detached. The mode of dressing, and the subsequent treatment and the progress to convalescence were almost precisely a repetition of what occurred in the McGowan case.

Dr. West, of Princeton, who visited the patient several times after the operation, expressed the greatest surprise at the negative character of the symptoms. In three weeks all the ligatures were away, wound cicatrized fully, appetite good, bowels regular, and patient walking about house. She is now well.

In both of these cases I am convinced, as were all the medical gentlemen present, that the deep sutures were eminently useful, if not of vital importance in averting bad or dangerous symptoms after the operation. They controlled a passive hæmorrhage from the abraded parietes; they diminished the size of the abdominal *cavern* produced by removal of the tumor; they compressed and gave mechanical support to the atonic walls, enlarged and loosely extended as they were, by long distention from the tumors; they assisted, as it were, to hold the whole peritoneum in splints while the restorative process was going on. Their removal was attended with no disturbing or unpleasant symptoms. The parts by their own elasticity gently receded, and rounded into their natural form, as soon as the ligatures and quills were removed.

CASES IN MIDWIFERY.

By S. Salisbury, M.D.

Case of Sudden Death two Hours after the termination of Labor.—Mrs. G., the mother of two children, was delivered Jan. 15th, 18—, at 4, A.M. The three stages of bor were completed without difficulty and without appearance of exhaustion. There was no hæmorrhage, and the physician in attendance, the late Dr. Everett of Sherburne, left his patient without having noticed anything abnormal. He was recalled at 7, A.M., and found Mrs. C. much prostrated. No cause for her depressed condition could be discovered. All the means used to stimulate were of no avail. Having been sent for by Dr. E. I saw her a few moments before she expired, between 11 and 12 A.M., and the next day made a *post-mortem* examination. The left pleura was found filled with fluid, the lung being completely compressed at the upper part of the cavity. Mrs. G. was a person of uniform health, and had been well during pregnancy, until about a week before her confinement, when she had a pain in her side, which did not oblige her to omit her household duties, those of a farmer's wife, up to the time of her confinement, nor had it been mentioned to the physician until after her death.

Case of Closure of the Os Uteri.—Mrs. B. had an attack of peritonitis in October, 1869, being at that time three months advanced in pregnancy. The pain and tenderness upon pressure were extremely acute, and were limited to a space not exceeding four inches in diameter, in the right hypogastric region. She was not able to endure the horizontal posture during eight days, but remained perfectly at rest in a reclining chair, and under the influence of opiates. After her recovery, which took place in about three weeks from the attack, she remained in good health until her labor, which commenced on the 6th of April, 1870, at 10, A.M. This was her fourth labor, the first three having been normal, and of short duration. I saw her at 1, P.M., and, upon making an examination during a contraction of the uterus, did not succeed in touching the cervix, or even in discovering where it had been, although the anterior and posterior cul de sac were easily reached. The wall of the uterus was thin, the presentation being felt through it. Upon the second examination a slight roughness was perceived in the locality where the cervix had been.

After two hours and a half, not the slightest dilatation having occurred, and the anterior portion of the uterus being forced down towards the external organs, it was evidently necessary to make an opening at the point where the cervix had been, in order to prevent a rupture of the part which protruded. At first I attempted to effect the opening with the point of my finger, but could not penetrate the firmly closed os. I then made use of a female catheter, which was very easily introduced, and an opening effected without rupturing the membranes. Dilatation proceeded with great rapidity, in ten minutes was complete, and in fifteen minutes the labor was completed. The most important feature of the case was the marked resemblance of the protruding portion of the uterus to the distended membranes at the termination of the first stage of labor, especially during the last contractions, which occurred previously to the opening in the cervix being effected. Upon a hasty examination the distended uterus might have been mistaken for the membranes.

There was a copious hæmorrhage after the placenta had been expelled, by a strong contraction of the uterus. The hæmorrhage was followed by prostration and vomiting, which yielded in a few hours to opiates and stimulants. From that time convalescence has proceeded favorably.

Brookline, April 11, 1870.

Selected Papers.

ANATOMY OF BRAIN SHOCKS.

From a paper in St. Bartholomew's Hospital Reports, Vol. V., on the above subject, we quote the concluding portion.

Quite agreeing with the remark made by Baillarger that it is most important to collect facts for laws, I submit the cases here briefly recorded to the consideration of those who are interested in examining into the laws which may be deduced from such pathological experiences. Whilst feeling diffident, as before mentioned, in venturing upon conjectures which a more extended experience may show to have been based upon insufficient data, it seems to me that the following points deserve attention:—

1. The rapidly fatal results which follow bleeding into the pons, the ventricles, and upon the surface of the brain.

2. The rapidly fatal results of bleeding into the right hemisphere, outside the thalamus and corpus striatum, as compared with bleeding into the corresponding parts on the left side.

3. The condition of the pupils, which in the great majority of cases are fixed midway between the extremes of contraction and of dilatation.

4. The small number of cases in which vision is affected, including cases in which both sides of the brain happen to be diseased or injured.

5. The occurrence of pain in connection with affections of the outer gray matter of the brain; its absence in all cases of bleeding into the substance of the corpora striata, or optic thalami, or both.

6. The general agreement of these cases with the propositions—that with loss of speech the anterior cerebral lobes, or the

parts about the corpus striatum or the motor track, are diseased or injured; that such disease or injury involves the left side; that whilst the parts about the corpus striatum are found to be diseased, it is not evident that the disease or injury is limited in these cases to the third frontal convolution (so called).

7. The comparative recovery of speech during the stage of delirium.

8. The association of convulsions with disease about the track or distribution of great vessels, especially of the middle cerebral arteries; with the shock of a hæmorrhage.

9. The connection of convulsions with left side paralysis, and with disease of the right hemisphere external to the optic thalamus and corpus striatum.

EFFECTS OF INJURIES TO THE SPINAL CORD.

An article on the above subject, by Wm. S. Savory, F.R.S., in the same work, concludes as follows:—

After death from injury to the cord without fracture or displacement of bone or hæmorrhage or lesion, such as laceration of the cord or its membranes—that is, in fatal cases of concussion of the spinal cord—the various states presented by the cord and its membranes may be thus classified:—

In cases which have proved rapidly fatal, and where an examination has been made at an early period after the injury, no morbid change of any kind has been discovered. Boyer mentions two such cases. Abercrombie refers to four cases recorded by Frank. Also F. Jordan's case, referred to further on. But such instances must be very rare.

After a longer period the morbid appearances presented may be referred to inflammation, usually chronic, of the cord or its membranes, or both. The most obvious of these may be described as excessive vascularity of the cord, sometimes induration, more commonly softening, disintegration and the presence of lymph, or pus; of the membranes thickening, and opacity with the presence of serum, lymph, or pus.

At a still later period the changes observed may be referred to atrophy or rather degeneration of the portions of nerve structure. In some cases, however, changes, apparently of this nature, very rapidly supervene.

It can be conceived that violence to the spine, which may not produce any immediate visible lesion of the cord, may yet subject it to such sudden and severe commotion as to lead to defect or perversion of its nutrition, resulting in such changes as have just been alluded to.

Of course, in referring to statements that no morbid appearance was discovered after death, it is not for a moment suggested that no morbid change of any kind had taken place. For, first of all, in such cases it does not appear that the microscope was employed, and it is well known that profound changes in nerve structure may escape the naked eye; and then in some of these recorded cases the interval that intervened between the injury and death, and the symptoms that existed, enforce the conviction that considerable changes of structure had been overlooked. Even in instances such as the following, which is related by Mr. Furneaux Jordan, where death immediately followed upon receipt of the injury, it does not accord, as indeed Mr. Jordan points out, with what is at present known to believe that such effects upon function could be produced without any alteration whatever of structure.

A man discharged a pistol into his mouth and immediately died. "Examination of the body showed that the bullet struck the body of the second cervical vertebra; but, beyond slight laceration of the tongue and of the upper part of the larynx and pharynx, no injury was done; no vertebral or any other bone was broken. The naked eye could detect no change in the upper part of the cord or the membranes."

Even assuming a case of the kind to occur where the minutest microscopic scrutiny by a most skilful observer failed to detect any change, still nothing, I believe, in what is yet understood of the relation of force to matter, supports the conception that the function of a nerve centre can be thus struck out, the integrity of its structure being nevertheless unaffected.

Let it be remembered, also, that when by the naked eye, or only by the microscope, alterations of structure are detected after death, these do not, cannot for the most part, represent the direct effects only of the injury apart from the result of the morbid actions which have been thus set up. Even when the injury is immediately followed by death, such an examination cannot, at least as a rule, anticipate the changes which ensue after death. For example, suppose after death a portion of the cord is found softened or its substance disintegrated—are we to accept this as the actual condition during life to be associated with the symptoms which appeared, or is it not often, at least in great measure, the result of changes which the damaged or diseased part has undergone after death? But this brings me to a subject too large to be discussed here. I mean the changes which structures undergo after they have ceased to live, and the conditions which influence these. Observations and experiments upon the coagulation of the blood, and the rigidity of muscles, upon the structure of nerve fibres, and the changes in the reaction of nerve substance, and, I would add emphatically, upon the structure of blood cells, afford glimpses of what may in future be revealed when this all important inquiry shall obtain more of the attention it deserves.

Only here I would add that before the question—in what way these changes are affected by disease or injury—must come the study of those which naturally follow in consequence of death.

Perhaps too much has been made of the fact that there does not appear to be on record any unequivocal instance of immediate death from concussion of the brain pure and simple. For although direct evidence of the fact in this form may be wanting, there is, it would appear, at least enough of indirect evidence to show that a fatal case of concussion of the brain, without any visible lesion, may occur to-morrow.

In fatal cases of concussion, accompanied by visible injury of brain substance or other morbid appearance, will the lesion discovered always suffice to explain the result? Is there enough in what is seen to account for sudden death? On the contrary, there is evidence to show that in other cases lesions more extensive than these are compatible with life. Contusion of the brain may and does occur without producing any symptom at all, or none until some time after the injury. Surely, then, the fatal result in some of these cases must be attributed to the effects of concussion, beyond those that are visible. And may not the difficulty of demonstrating the fatal effects of pure and simple concussion be due to the fact that when concussion of itself is severe enough to destroy life, it is almost always severe enough to cause visible lesion, or at least some vascular disturbance or extravasation which may be noted afterwards.

Moreover, in the great majority of cases of bruising of the brain, the contusion is circumscribed and more frequently found at the under part of the cerebellum and cerebrum than in any other place. The unconsciousness and collapse can hardly be referred to this.

The effects which immediately follow injury of the brain or spinal cord, even when attended with visible damage to structure, must in many cases be due to the shock of the violence rather than to the lesion. For these effects are often transient; they pass off, while the damage done to the structures remains much as it was at the time of the accident. If the collapse or unconsciousness depends on the fracture or depression of bone, or upon any bruising or laceration of nerve centre, how can we account for the sometimes rapid recovery with such mischief still existing? Such instances seem to demonstrate that in the simpler cases of concussion, where there is only congestion or slight extravasation, the effects depend upon the shaking of the nerve substance rather than upon the condition of the vessels. In such cases the symptoms and morbid appearances are both direct effects of the shock. The symptoms cannot be explained by the morbid appearances.

Again, concussion of the brain often produces complete unconsciousness for an interval, upon which, however, complete recovery follows so rapidly that we cannot believe it to have been associated with any actual lesion in the ordinary acceptation of the term. And yet this complete insensibility implies an annihilation of function of at least some part of the encephalon. If the centres of consciousness may be thus paralyzed, why not the centres of respiration?

CASE OF WOUND OF THE BRAIN. BREECH-PIN OF A SHOT-GUN BLOWN OUT, ENTERING THE BRAIN FOUR AND A HALF INCHES—RECOVERY.

By D. D. Halsted, M.D., Laclede, Mo.

On October 21st, 1869, C. W., aged 17, of temperate habits and vigorous constitution, while out fowling with a single-barrelled shot-gun, had the breech-pin of his gun blown out while taking aim, the sharp point of the back end striking the forehead in the frontal suture, midway between the coronal suture and the base of the os frontis, passing through the integuments and the os frontis, lacerating the falx cerebelli, penetrating the anterior lobes of the cerebrum four and a half inches, literally crushing the os frontis for a space of one and a fourth by one and three-fourths inches square, destroying one and three-fourths inches of the longitudinal sinus, and detaching the internal lamina of the os frontis from the lower edge of the opening made by the entrance of the breech-pin all the way to its base, causing severe hæmorrhage from the longitudinal and frontal sinuses. A splinter of the gun-stock struck the right superciliary arch, directly above the right canthus internus, depressing that portion of the frontal bone immediately superior to the nasal bones, so far as to cause its fracture from the internal canthus of the left orbit upwards into the main aperture made by the breech-pin.

When injured he was alone. His own statement is that when injured he did not for a moment lose consciousness, but the shock was so severe that he dropped on his hands and knees, and for some time heard a loud, prolonged ringing in his ears. After a few moments he rallied from the shock, and in wiping the blood from his face, he felt the breech-pin protruding about half an inch from the forehead. This he got hold of and pulled out. He then washed his face in a pond of water close by, and lay down a short time to rest himself, after which he got to his horse and, mounting, rode to the nearest house, over a mile distant, where he arrived bewildered and half unconscious. When I first saw the patient, nearly twelve hours after the accident, I found him lying on a bed in a semi-comatose condition, the eyes swelled and shut, the upper part of the face and forehead burnt and blackened with the powder. Dr. Thompson had been called in, and had sewed the wounds in the scalp as well as he could, and the brain broken up was finding its way freely to the surface between the sutures. Considerable hæmorrhage was taking place through the posterior nares into the stomach, from which the blood was ejected every few minutes. The house in which I found him being a log cabin, very open, and without a window or any other means of obtaining light, except through the door or between the logs where the chinking was out, I had him placed on a sleigh and removed to his own home, nearly three miles distant. I then proceeded to operate, making an incision through the integuments in the shape of an inverted U, commencing a little inside of the centre of the left superciliary arch, passing upward, to the right, and downward, terminating at a corresponding point over the right superciliary arch, including both the wounds within the line of the incision. On separating the integuments from the cranium within the circle of the incision, a large opening in the os frontis, measuring one and three-fourths inches in length, extending from the centre of the frontal bone downward towards its base, including the frontal suture, and one and a quarter inches wide, extending from the right side of the frontal suture to the left. The opening was filled up with the protruding substance of the broken brain, intermingled with fragments of bone. The latter I removed, and then inserted my finger in the wound its whole length; I could not reach the termination of the track made by the breech-pin, but was enabled to ascertain the depth and locality of numerous fragments of bone, some of which were over two inches from the surface. These I extracted as carefully as I could; also a ¾ inch screw, which was buried about two inches in the substance of the brain, making in all over thirty-eight fragments of bone removed from the wound, and one ¾ inch screw. Some of the largest fragments were over half an inch square. The direction of the iron from its place of entrance was backward toward the occiput; slightly downward and to the right, apparently nearly touching the petrous portion of the right temporal bone. Passing my finger downward along the frontal suture inside the frontal bone, I ascertained that the internal plate was separated from the external all the way to the base of the os frontis, leaving the frontal sinus destitute of its posterior wall, and its anterior wall completely detached from the os frontis and nasal bones, but attached to the integuments. This I placed in proper position as well as possible, and placing the integuments in position over the fracture, secured with sutures, and ordered cold water kept constantly applied to the whole anterior portion of the head, and gtt. x. of conct. tinct. of gelseminum given every two hours, and in event of uneasiness or severe pains, morph. sulph., gr. ⅙, to be given every four hours.

Oct. 23d, 12.30, A.M.—Patient has slept well; pulse 68; respiration slow; temperature cool; is rational, but I forbid any one talking to him; gelseminum continued; also, a Seidlitz powder every four hours.

24th, 10, A.M.—Pulse 72, and soft; tongue coated; bowels not operated; sleep natural; skin cool. Treatment continued.

25th, 2, P.M.—Pulse 72, and soft; tongue coated; bowels open; sleep natural; respiration slow; skin cool; has slight appetite; incision uniting by first intention nearly its entire length; brain protruding through the wound made by the breech-pin.

26th, 8, A M.—Pulse 100, quick, feeble, and irregular; tongue coated; urine retained; face flushed; skin hot and feverish; slight delirium; has had two convulsions during the night; no symptoms of suppuration commencing near the surface of the wound; incision united its whole length, except where I have kept it open with tents. 2 P.M., pulse 70, softer and better volume; delirium abated and succeeded by a semi-comatose condition; no operation of the bowels. Treatment continued, with addition of half a drachm of sweet spirits of nitre every two hours; ice applied all around the head and to the cerebro-spinal region.

27th, 10, A.M.—Pulse 76, feeble and soft; no operation of bowels; urine natural in quantity and quality; sleep good; respiration quite slow; slight feverishness. Treatment continued.

28th, 10, A.M.—Pulse 100, irregular, quick and feeble; sleep profound, verging on coma; respiration slow and slightly stertorous; has had four convulsions during the night. Continued treatment. 5, P.M., pulse 82; sleep more natural; respiration more natural; one slight convulsion since noon.

29th, 8, A.M.—Pulse 86; bowels open; appetite pretty fair; sleep restless; skin cool. 4, P.M., pulse 80; skin rather hot; slight delirium; suppuration has commenced, but is very slight; up to the present time his memory has seemed quite defective.

30th, 11, A.M.—Decidedly better; pulse 84; bowels open; appetite good; sleep and respiration quite natural; skin cool.

Nov. 2d, 2, P.M.—Pulse 84; tongue clean; bowels open; appetite good; sleeps well, and is refreshed thereby; respiration is natural; wound is suppurating freely; pus laudable; strong hopes of ultimate recovery.

22d.—Has continued rapidly improving up to the present time; he is now able to be up in a chair most of the time, and walks around the house a little; edges of the wound have sloughed off, and the integuments retracted, leaving a large opening, filled with granulating excrescences, preventing the drawing of the edges of the wound together; dry calomel having been applied, and failing to remove the granulations, I have applied pulv. alumin. exsiccati, which is answering my expectations fully.

Dec. 3d.—Has continued improving, and is quite well; wound all healed over, except a small sinus through which three or four bone spicula have escaped during the last ten days.

Jan. 10th.—Rode to Laclede to-day, a distance of five miles, on horseback; tells me he has been at work for several days; is very fleshy and ruddy looking; sinus still open, but discharging very slightly; four or five small spicula of bone have worked out since I last saw him, on the 3d ult.; says he experiences nothing unusual or different in his condition from what it was before he was injured; recollects perfectly everything that transpired previous to his removal home, but has no recollection from that time until the 30th of October; his statement of his actions subsequent to the injury was fully confirmed by the appearance of the ground where he had wandered, leaving a pool of blood to mark each place where he had halted a moment to rest or to wipe the blood from his eyes. —*St. Louis Med. and Surg. Journal.*

Bibliographical Notices.

Electricity in its relations to Practical Medicine. By Moritz Meyer, Royal Counsellor of Health, &c. Translated from the Third German Edition, with Notes and Additions, by William A. Hammond, M.D. New York: D. Appleton & Co. 1869.

Electricity has been much neglected in America in the treatment of disease. The reason of this may be in part the lack of text books, but probably still more from a feeling of the difficulties connected with the subject, which, however, are more imaginary than real. But even those who attempt to use the electric currents in the cure of diseases too often go to work in ignorance of the first principles which ought to guide in its administration, and are content with two metallic conductors held one in each hand, and this even when the seat of the paralysis is in the legs.

But the time has passed by when a physician who desires to do justice to his patients can ignore the use of electricity; and any work which will extend the knowledge of the uses of this therapeutic agent in the American medical community must be cordially welcomed.

The Preface states that the origin of the work dated as far back as 1852, when it was offered in competition for the prize given by the Medical Society of Ghent "On the Efficacy of Electricity in the Treatment of Disease." The prize was awarded to Duchenne, but this treatise received an honorable mention and an honorary award. It was translated into French, and published in the annals of the Society. As that translation was defective, the author, in 1851, published the first German edition. A second edition appeared in 1860, and the third in 1868.

One characteristic of the book is its avoidance of disputed questions and absence of theorizing, adhering closely to practical details. The author's experience seems to be his guide, and he accordingly reports 112 cases, mostly from his own practice, though he likewise draws from the labors of others when they better illustrate his subject.

After a short review of the history of medical electricity, a couple of pages are given to friction electricity, and then contact electricity (galvanism) is explained. The laws according to which the electrical currents are generated and act are clearly yet briefly explained, and the formula given according to which a battery is to be chosen with reference to the work to be performed. All that is essential to an understanding of the constant current in its therapeutical relations is so narrated as to be easily understood. Next, induced electricity is considered, and the three currents which arise in the primary and secondary wires are explained, as also their mode of acting on each other.

Sections four and six are the most important, if one part can be said to be more important than another where all are essential to a thorough understanding of the subject. If these two sections are completely mastered, the chief difficulties, which perhaps deter many physicians from studying electro-therapeutics, will be overcome, and further progress will be comparatively easy. At the end of Section four is a concise statement of the cases in which the interrupted and the constant currents are applicable.

"1. The interrupted current is applicable in those cases in which we wish—

(*a*) To excite the muscles, the nerves of sense, the sensory or the motory nerves.

(*b*) To produce contractions of the blood or lymphatic vessels.

(*c*) Or to affect certain organs supplied from the sympathetic.

"2. The muscular contraction produced through Faradization increases the temperature of the disturbed muscle, and is accompanied with an increase in the volume of the same."

3. Relates to increase or diminution of sensibility by the electric current and the length of time required to produce the results desired.

4. Relates to relaxation of a tense muscle.

"5. The use of the *constant* current is indicated in those cases in which we wish—

(*a*) To excite the nerves of sense or the skin nerves.

(*b*) To destroy the outer skin or mucous membrane.

(*c*) To produce an increase of warmth.

(*d*) Or to induce a chemical process, and also blood coagulation.

"6. While generally the density fluctuation of the interrupted current produces the most powerful exciting means for the motory nerves and muscles, there are certain peripheral paralyses in which the constant current, probably in consequence of its uninterrupted excitation, produces effects which cannot be brought about by the induced current.

"7. The sensitiveness of a muscle to the interrupted current can in many cases, through the application of a tolerably strong constant current, be increased."

8. Refers to changing the direction of the current.

9, 10, 11, refer to the direction current and the position of the electrodes.

"12. There is no doubt that we can, by means of a constant current, even of tolerable strength, affect through their bony coverings the brain and spinal marrow."

The choice between the two kinds of electricity is referred to again under the different affections to which they are suitable. On page 408, the subject is again referred to in reference especially to paralysis of motion.

In Section six are mentioned the points to which the electrodes are best applied to irritate the different nerves and muscles. Most of this section would be best studied with the electrodes in hand and applied to the different points. And in the next section the actions of the different muscles is stated, with the deformities resulting from the paralysis of each. These two sections, to be mastered, would require a review of the anatomy of the nerves and muscles.

Section eight is devoted to the use of electricity in the diagnosis and prognosis of paralytic affections; and Section nine to electricity as a curative agent. Both of these sections are fully illustrated by the narration of cases. It might be supposed that these two sections would run into each other and be in part a mere repetition one of the other. But this is not so; the eighth Section includes also the treatment of those diseases where electricity can be used to advantage as a means of diagnosis, and the ninth Section affections where this agent cannot be well used for diagnosis.

In reading Section eight there is left in the mind a feeling that it would have been more satisfactory to have had parts of the section more fully treated, and that one would be better satisfied had the author expanded his views more, so as to have given the result of his large experience and remove yet more of the difficulties in the way of diagnosis. Yet short as some of his descriptions are, they are exact and sufficient. Of the value of electricity as a means of diagnosis he says :—" An examination by electricity not only furnishes us the means of distinguishing the various paralyses that proceed from the brain, the spinal marrow, the sympathetic, the nerves, or the muscles, but it also opens to us still wider views with reference, in the first place, to the special seat of these varieties ; whether, for example, in a nervous plexus, a nervous trunk, a whole muscle, or any part of these, &c.

" An examination by electricity informs us, in the second place, concerning the origin of the malady. It enables us, for example, to distinguish between a paralysis of the extensors, caused by the poisonous action of lead, and a paralysis of the N. radialis from rheumatic causes.

" In the third place, this mode of examination furnishes us insights concerning the degree of nutritive disturbance in the nerve or muscle affected."

In reference to cerebral paralysis he says: " If the symptoms manifested are of peripheric origin, then the electro-muscular contractility, as we shall see, begins to diminish with the second week, and, as the paralysis becomes complete, is, in the second or third week, wholly extinct, while in paralyses of a central origin this contractile power is found to continue unimpaired."

Under hysterical paralysis it is stated :— " The characteristic signs of paralysis of this kind are—1. The coincidence of the actual paralysis, with anæsthesia of the skin, muscles and bones ; 2. The frequent transition, as the case proceeds, from anæsthesia to hyperæsthesia, and from a low to a high degree of motor irritability; 3. The insignificance of the operating cause compared with the frequently serious nature of the effects.

" Except in cases in which the hysterical is united with peripheric paralysis, the electro-muscular contractility of the muscles, whose motions are not under the command of the will, is perfectly preserved, although their sensibility is lessened, or entirely gone."

At the close of the article on infantile paralysis is a valuable addition by Dr. Hammond, giving several cases in which the constant current from a powerful battery, rapidly interrupted, was used to stimulate the muscular irritability lost to the induced current, which afterwards was restored. The method of diagnosis by extracting minute portions of the affected muscles is also alluded to.

" Whether or not it be a fact that an affection of the sympathetic is the cause of progressive muscular atrophy, we must for the present assume the affirmative view."

The different affections of the nervous system are briefly considered. No attempt is made to give a complete description of the diseases. A knowledge of the symptoms, course, cause and pathology of these must be learned from other sources. Only the treatment by electricity is fully and systematically considered. The benefit to be expected from electro therapeutics is stated, so that the book may serve as a guide to practitioners who do not wish to use the agent themselves, but may desire to know whether it is worth the while to advise its use by others. In this respect sections eight and nine are valuable, and would repay perusal, though the rest of the work should be neglected.

Among the curative effects and results mentioned may be noticed several cases of locomotor ataxy, and in progressive muscular atrophy he says, " In my own practice, though many cases of this character were unsuccessful, a greater number were fortunate in their result ; among the latter were included those, in particular, in which the disease was limited to the forearm and hand, or to the shoulder, arm and hand, of one side. Also Case 14 is a remarkable example of the benefit derived from the persevering use of electricity in a case of almost hopeless injury to the cord from a fall.

A short chapter is devoted to the use of electricity in obstetrics, and another to its use in surgery.

In conclusion, it may be stated that neither the constant nor the induced current is exclusively recommended ; but the author has endeavored to give directions which will serve as guide in the choice of one or the other form, according to the nature of the case.

There are a few typographical errors which a more careful proof reading would have obviated. On page 19 the formula for Ohm's law is given, and then this formula is contradicted in words ; the same is true of the formula in the middle of the page, where S is printed for L. On page 134, the last paragraph but one, figures 11 and 12 should read 16 and 17 ; and on the next two pages the figures are transposed ; fig.

16 should be fig. 17, according to the explanation given in the text.

The book is handsomely printed on tinted paper, and is one which may be read with profit, and treats of a subject with which every physician ought to be familiar.

S. G. W.

Medical and Surgical Journal.

Boston: Thursday, April 28, 1870.

THE CONFINEMENT OF LUNATICS.

The French secular press seems to have been undergoing the same sort of aberration of mind which has disturbed the types of some of our leading newspapers. The alleged incarceration of sane persons in lunatic asylums appears to have shared the attention of sensation writers in Paris with the question of the dead-heads of the guillotine. The general secretary of the Medico-psychological Society has accordingly furnished to the *Gazette Hebdomadaire* a "declaration" which we here translate.

1. The spirit of the law of June 30th, 1838, is to entrust to physicians the duty of ascertaining the insanity of those whom their relatives or the civil authority would place in lunatic asylums. The progress of mental pathology, during the last half century especially, has shown that insanity presents itself under many different forms; and that the acts and words of the lunatic are not always stamped with manifest extravagance and perversion to the extent of indicating to anybody and everybody the existence of mental disorder.

This same progress has also established the fact that in many cases, the insanity at its commencement, or even during its entire course, is compatible with a certain proportion of reason, and of consistency in the acts and words, which mask the disease in the eyes of observers who are not versed in the science of mental affections. It is precisely in the initial period of the malady that the going at large of crazy people may engender the most pernicious and dangerous consequences. It is those affected with partial or intermittent derangement, the monomaniacs, "the lucid lunatics," as they are called, who most compromise the safety of the citizen, and their own; who scandalize morality; and who are liable to be in their families a source of the most deplorable afflictions, embarrassments, or even ruin. To postpone the sequestration of these persons until their derangement shall have become so complete that its existence can no longer be dissimulated, would be to sacrifice the public security to the desire of indulging the patient with a liberty of which he may at any moment make a bad use. In the same way, when the mental affection presents periods of remission or intermittence, if the lunatic be released from confinement, on the ground that he is for the time in his right senses, the risk is incurred of some action on his part disastrous to society. Now it is the physician alone who, by his special knowledge, is in a condition to discriminate between the period of remission and that of veritable recovery. It is necessary to have recourse to his experience to ascertain if the patient may without danger be restored to society. He is the proper judge, not only of the nature of the treatment which should be followed, but of the length of time during which that treatment should be continued.

To modify the law of 1838 so as to hand over to the magistrate or to a family council the responsibility of laying down the course of treatment for the patient, and of pronouncing from time to time on the condition of his mind, is to assign a task to parties who are not competent to execute it, and to exact of them a special kind of knowledge, which under ordinary circumstances they cannot attain. Generally speaking, in case of disease no one thinks of seeking other advice than that of the man of science. Why should exception be made in cases of mental disorder, where diagnosis is no less delicate or difficult than in other pathological conditions? In fine, there should not be a mere taking of the physician into the consultation, when it is proposed to place an alleged lunatic in an asylum. He is the sole competent judge of the whole question; and all that should be exacted of him, is the observance of formalities sufficient to prevent him from abusing the confidence reposed in him, and the power with which he is invested. [In the course of former remarks on this subject, we have given in our adhesion to the propriety of securing additional safeguards here to the liberty of the alleged insane. We think it important to do this in our land of freedom, where the law does not guarantee to the citizen competent and trustworthy physicians, and where some medical diplomas are issued which are not worth the parchment on which they are written. Our chief protection hitherto has been the integrity and wisdom of the superintendents of our Insane Hospitals.]

II. Is the law of 1838 susceptible of, and has its practice given rise to abuses to which there is urgent need of applying a remedy? The necessity of sequestrating the insane has been recognized from antiquity to the present time—in the East as in Europe. Sequestration is not only a guaranty for society, but it operates for the good of the patient. The placing of the lunatic in an asylum is very often a necessity for his relatives from their inability to accord him proper care, and to protect themselves from the dangers and the difficulties to which they are subject from the perversion of mind and the eccentricity of the patient. The asylums are, after all, only hospitals or *maisons de Santé*, specially devoted to the treatment of mental maladies. They are not prisons, and the discipline which is exercised in them is only the extension under special conditions of the discipline used in other hospitals, &c.

The law of 1838 has furthermore subjected these establishments to inspections, to visits of authority, and to magistrates whose office is to prevent sane persons or recovered lunatics from detention in them. But here the ignorance of those who are unacquainted with mental disorders has laid them open to the persuasion that such wrongful detention is of frequent occurrence. The lunatic is but rarely aware of his condition; and when his insanity is so limited that the reason remains unaffected in many of its modes of manifestation, he does not fail to complain of his confinement in an asylum, and to represent it as an instance of arbitrary sequestration. He talks and writes about it; and his utterances often show a certain amount of logical guidance, and of coherency, which may pass current with visitors and others who may not know the antecedents and the motives to which is due the presence of the patient in the hospital. This error of non-professional persons becomes the more deeply rooted through the publication of memoirs which lunatics who have left the hospital while as yet not fully recovered, have written under the domination of the idea that they had not been insane. In these memoirs they are led by unwillingness to continue under an unpleasant imputation, or because they have completely forgotten their malady, to maintain that they have been victims of arbitrary sequestration, and to ascribe it to motives quite different from the real ones.

In point of fact, however, as happened in the Puyparlier affair, every time that there has been an inquest upon the mental condition of individuals alleged to be victims of this arbitrary sequestration, it has been proved that those persons were very far from being, or from having been untouched in their mental faculties; and that they had manifested, or perhaps were actually manifesting symptoms of derangement of mind which vindicated the measures which had been taken with them. Without doubt there may be a difference of opinion as to whether the patient should or should not be placed in an asylum, for the sake of the public security, for the cure of the patient, or for the treatment he may require. That question depends upon a great number of circumstances; though it is incontestable that the point can be properly weighed by men of science alone. And, further, even if certain physicians have expressed the opinion that an insane person who is detained in a hospital might without harm, provided he were subjected to careful watching, be restored to his family, that does not amount to saying that the lunatic had been arbitrarily sequestered. Never has the superintendent of an asylum lent himself to machinations for the purpose of depriving a sane man of his liberty, whom his family or the civil power might have been interested to prove a madman. Such a gratuitous and malignant supposition would be an insult alike to the French medical profession, so conspicuous for its devotion to and its zeal on behalf of the unfortunate, and to the judicial authorities, whose connivance or negligence would be involved in the charge.

The Medico-psychological Society, which makes all that concerns the subject of mental alienation the special subject of its investigations, which counts on its roll not only most of the "alienist" physicians of Paris and of many of the Departments, but also philosophers and jurisconsults, protests against the invidious or impudent insinuations which several journals have of late too easily admitted into their columns. Without denying that the law of 1838 may be susceptible of certain improvements, the Society takes upon itself publicly to declare that it approves the spirit and the basis of that law, and formally to call attention to principles and facts which it is important not to lose sight of.

The Puyparlier affair alluded to in the preceding declaration is thus mentioned in the *Union Médicale* :—

The Puyparlier case has just received a judicial solution, after two months of public suspense upon the subject. It was alleged that a crime had been committed, with the connivance of two physicians; that a man perfectly sane in mind and in possession of all his faculties had been mysteriously carried away from his house to be incarcerated at Charenton ; that he had been taken under circumstances which constituted a veritable ambuscade ; that the principle of personal liberty had been odiously violated in his case ; and that his sequestration, if it were prolonged, would be "equivalent to an assassination."

This entire structure of accusations falls to the ground before the judgment pronounced by the tribunal of the Seine. There is no longer any ambush, any crime, any of the phantasmagoria created by the imaginations of the chroniclers of the day. There remains only the most simple and natural thing in the world—the consignment of a patient to a hospital. M. du Puyparlier, about whom such a noise has been made, and who was claimed to be a victim of malfeasance, is a madman, by the declaration of experts. And since he is a lunatic whose derangement is of a nature to compromise the order of society and the personal safety of those about him, he is remanded to Charenton, because his proper place is in an insane asylum. We have here the decision of the tribunal of the Seine after long and minute inquiry. It is no longer a simple medical opinion, but a judicial decision.

From an article in *St. George's Hospital Reports*, entitled "Notes on the Subcutaneous Injection of Morphia," we make the following excerpts :—

"*The Syringe.*—In the choice of a syringe, I should prefer the screw ; it has undoubted advantages over the simple piston, especially where large quantities of fluid are used ; for by unscrewing the barrel, and removing such obstacles as blood-clot or crystals of morphia from the tube, a second puncture may often be avoided. I have found also that the steel points, kept sharp and well oiled, cause much less pain and less local irritation than the gold ones usually supplied by the makers. * * * *

"The strength of the solution must vary with the dose. For ordinary use, perhaps gr. iij. of the acetate to ʒj. of distilled water is the most convenient form, giving a commencing dose of miij. to iv. or possibly v. [1-20, 1-15, 1-12 gr.]

* * * * *

"Where the whole body is open for selection, the dorsal surface of the arm and forearm has seemed to be least sensitive to pain ; and after these, the outer side of the calf. * * *

"When introducing the fluid, especially in an untried case, it is of the utmost importance to inject slowly. As the morphia enters drop by drop, the results of each turn of the piston can be noted on the pulse, the pupils, the stomach and the nervous system generally. The most deadly faints I have seen were undoubtedly caused by too rapid absorption of the narcotic, either from hurried injection or from the accidental injury(?) of lymphatics, which became inflamed, and resembled raised cords on the surface of the skin. In these latter cases the effects were invariably sudden and severe.

"In first cases I have usually allowed from three to five minutes to each minim of the solution (gr. iij. ad ʒj. 1-20 gr.), pausing at the first intimation of nausea, faintness, or marked alleviation of symptoms. With these precautions, I have never, in some thousands of injections, met with any ill effects that a glass of brandy-and-water did not quickly relieve. * * * *

"It is impossible to judge, without a trial in each individual case, whether the excitant or depressing effects of morphia will predominate ; and so strongly impressed is Dr. Harley by the dangerous uncertainty in first injections, that he considers morphia should never be injected alone, unless there is reason to know that the patient will experience no ill effects. It should always, in his opinion, be combined with one-ninety-sixth of a grain of sulphate of atropia, which he has found to counteract the depressant and nauseating effects of the simple drug.

"My own experience of this combination is, as yet, too limited to enable me to speak with confidence on the point; but in one case where it was tried, even the one-ninety-sixth of a grain of sulphate of atropia produced such dryness of the fauces, and general irritability of the nervous system, that it had to be discontinued. * * * *

"*Dose.*—The initial dose must of course be graduated according to the individual and the nature of the disease; but it appears to have been dangerously large in most of the recorded cases—a quarter, a third, one and even two grains are spoken of; and it is little wonder that depressing and even fatal consequences have been the result in some instances. My own experience leads me to agree entirely with Dr. Anstie, that a quarter of a grain of morphia is, as a rule, an unsafe dose to commence with. In a neuralgic case, given by Mr. F. Woodhouse Braine (*Medical Times and Gazette*, Jan. 4th, 1867), one-third of a grain of morphia injected over the insertion of the deltoïd caused dangerous symptoms in fifteen seconds; no mention is made of the rate of injection. In a case of mania, half a grain proved fatal; and a similar dose narcotized another patient for four days. Dangerous symptoms have also been found to follow the injection of a quarter of a grain (*Report on Hypodermic Injection*, p. 78). * * * *

"There is—I. *The Period of Excitement*, lasting for some twenty minutes. Acceleration of pulse, six to fifteen beats. Dizziness, headache, nausea. Rise in temperature very slight. In one case I found no change within thirty minutes after the injection of two grains; in another, as little as three-twentieths of a degree Fahr., the thermometer being held beneath the tongue during that time. Burning heat of the face, and general glow of warmth passing into profuse perspiration. Contraction of the pupils.

"To these may be added the following, which I have not seen described elsewhere:—

"The feeling of a sudden rush to the stomach, almost immediately upon the injection of the first drop, is very marked in some cases, and may not unfrequently account for some of the nausea complained of. From the stomach a feeling of relaxation and warmth, not unpleasant, passing to the extremities. * * * *

"Continued irritation causes a troublesome matting of the areolar tissue, and less space is left for the fluid to spread beneath the skin, but in spite of this, I have in one case* made upwards of 1500 injections, almost exclusively in the arm and forearm, without the occurrence of any serious inconvenience either from the punctures or the quantity injected, which at one time amounted to five and a half grains (gr. vj. ad ʒj.) of the muriate daily, at two injections. * * * *

"There are perhaps few cases of pain where it cannot be used tentatively in the way I have described; but reliable data on this point are sadly wanting, and those who have had most experience will consider well before introducing morphia where pain is referred to the brain or its membranes. There are undoubtedly cases in which its administration is fraught with the most imminent danger, and a death immediately succeeding the injection is regarded with much suspicion by the friends of the patient. The condition of the brain, as ascertained by symptoms, must in general decide whether morphia is to be withheld or injected; and there are probably few who would venture where inflammation or congestion of the brain had been made out to exist. * * * *

"In colic, intussusception of the gut, passage of gall-stones (*Medical Times and Gazette*, August 17, 1867), and of calculous matter from the kidney, relief is usually prompt and effectual. One case of the latter I may mention. A gentleman was seized with rigor, nausea, and intense lumbar pain, just as he was about to sit down at a dinner-party. Morphia and a syringe were fortunately at hand, and one-fifth of a grain was at once injected into the forearm. Complete relief followed in three minutes; the patient ate a hearty dinner, passed a comfortable evening in the drawing-room, and I promised to call and see him the next day. In the morning he had slept well, felt perfectly comfortable, and produced with evident satisfaction a small calculus (mulberry with phosphatic shell) which had passed with the morning urine.

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"1. That the solvent for the morphia should be distilled water without any admixture of acid.

"2. That the initial dose should be much smaller than that usually given.

"3. That the injection should be performed slowly.

"With these precautions, morphia may be introduced into the system safely, and for indefinite periods, with but slight disturbance of the bodily functions.

"Dr. Wilson says:—I cannot close this very imperfect notice of morphia injection without expressing my opinion that the subcuteneous exhibition of drugs is the greatest boon given to medicine since the discovery of chloroform!"

[Chloroform was *discovered* by Mr. Samuel Guthrie of Sackett's Harbor, New York, in 1831. Was it that event to which Dr. Wilson and others ascribe such honors?—Ed.]

Sebaceous Tumors of the Cranial Region.—To the practical surgeon the removal of a sebaceous tumor from the scalp must ever be a subject of no little anxiety; not on account of the operation itself, for that is an easy matter, but on account of the terrible consequences which now and then follow an operation of this kind.

The operation itself is a very slight one; so slight, indeed, that nothing is thought of it, either by the patient or by the friends; and as to the results, there is not the slightest misgiving. The tumor is removed, and all appears to be going on well, when suddenly erysipelas of the scalp supervenes; and, worse still, this operation, so trifling, is sometimes followed by purulent infection and all its terrible consequences.

With the possibility of such results, all the more distressing because the whole matter was apparently so slight, it behooves the surgeon carefully to guard his patient by every possible means against such an untoward issue. And first of all, before undertaking an operation ever so slight, most carefully should the patient's health be inquired into. The general health may appear to be good; but the surgeon must not be satisfied with this: he must carefully inquire into the state of the viscera, and especially of the kidneys. I say especially of the kidneys; for we cannot impress too deeply on our minds that persons may appear to be in good health, and yet have unsound kidneys. Albuminuria, it is now well known, renders patients peculiarly liable to inflammations of a low type; and albuminuria, it must be borne in mind, may exist without the slightest sign to call attention to it. Several such cases have fallen under my own notice; one not long ago, in which an operation of the most trifling kind was followed by symptoms of poisoned blood, and after death the kidneys were found in an advanced stage of granular degeneration. With such a state of kidneys, all operations which can be avoided ought to be so.—*St. George's Hospital Reports.*

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* Epileptic neuralgia, supposed to depend on tubercular disease of the brain.

WE regret the efforts now being made in the two branches of Congress to introduce radical changes in the organization of the medical corps of the navy. Bills are pending in the Senate and in the House of Representatives, either of which if enacted will effectually paralyze one of the few branches of government service which are not dependent on partizan or political influence, but on the individual merits and scientific attainments of their members. The House bill proposes that the present rigid competitive examination of the candidates for entry into the medical corps as assistant surgeons, shall be done away with, and that instead the appointments shall be made directly, with no other qualification than a medical degree from some medical college of good standing. The advocates of the change allege as a reason for its necessity that the large number of vacancies now existing—namely, fifty-four out of two hundred, which is the maximum number allowed by law—is the result of a determination on the part of the examining board to keep out all they possibly can in order to present a stronger claim to Congress and the country for the official elevation of the medical corps to a level of its compeers of the navy, the line officers. In a late number of the Washington *Chronicle*, which has steadily opposed "staff rank," these charges are directly made against the naval surgeons. The real reason why so many vacancies exist is due to the fact that properly qualified men do not present themselves for examination, because they know too well the difficulties and obstacles thrown in the way of those who are already in the service, and have at present no definite legal status whereby they can share equally the honors and privileges of their compeers of the "line." The army surgeons are satisfied with their status in all respects, and there are neither jealousies nor discords between them and the army line. Over two hundred candidates have been lately examined by the army medical board for admission into their corps, and all vacancies can thus be filled by choice from a surplus number of candidates. As a rule, a graduate from one of our medical colleges is compelled to take an extra course of study to satisfy the requirements of either the army or navy examining board, and a high order of professional talent is thus obtained to guard the lives of our soldiers and sailors. It is to be regretted that by any unnecessary legislation the naval surgeons should be exposed to utter demoralization, and we trust that the majority of both houses of Congress will be of this mind.—*Boston Daily Advertiser.*

In these days, when the possession of a diploma—save perhaps from a very few medical colleges of high standing—is no guaranty of fitness to practise medicine; and when many are calling for the appointment of civil boards of examination for the selection of those who are to be allowed the care of human health and life, it is a little too absurd to propose to do away with the present examination of candidates for the Medical Corps of the Navy, and to hand over the appointments to political partizanship. Shame!

Postscript.—The bills in Congress introduced by the enemies of "Staff Rank" propose, in addition to doing away with the competitive examination, that "no particular school of medicine shall be recognized;" thus homœopathic, "Thompsonians," Indian root and herb men, and all the rest of the quacks, will be admitted.

THE LACHRYMAL GLAND IN RESPIRATION.—M. Bergeon recently read a paper at the Académie des Sciences, of which the following is an abstract:—

The lachrymal organs, the secretions from which always pass through the nares, are met with even in the ophidians, although their ocular globe, hidden behind the tegumentary system, is entirely protected from evaporation. On the other hand, animals which respire air saturated with moisture, as the cetacea, are the only ones devoid of lachrymal glands. Nor are the lachrymal organs proportioned to the development of the eye, for in the zemni and spalax they reach a size a hundred times greater than that of the eye.

Not only do the tears serve to lubricate the respiratory passages, but it is the passage of the air into the nostrils which explains the progress of the tears through the flexuous and frequently narrowed nasal duct. By reason of the formation of the lower orifice of the duct—always narrow and usually capillary—the tears become "stored up" in the duct, the lachrymal sac, the lachrymal canals, and the oculo-palpebral space, which is closed in by the unctuous edge of the eyelids. The tears in this way represent a small liquid column, certainly a very thin one, but still continuous and extending from the secretory canals of the gland to the lower orifice of the nasal duct. Passing rapidly in front of this orifice, the respiratory current carries with it in a state of vapor the liquid which issues from the mucous surface, and induces, by a mechanism analogous to that employed in certain pulverizers, a true aspiration of the tears, which extends to the gland itself and stimulates its secretion. It is because such stimulus can no longer be produced when the lachrymal sac is obliterated, that the secretion of tears diminishes, and that epiphora does not ensue upon the operation for the obliteration of the sac. But these patients deprived of the lubricating action of the tears upon the mucous membrane of the nasal fossæ complain of dryness and irritation of the nose. It is to be noted also that the tears incessantly sucked into the nasal fossæ by the very act of respiration not only act by opposing the drying action of a constant current of air, but by the vapor which they furnish to the inspired air they assist in maintaining, even in the lung itself, that humidity which is essential to the interchange of gases. By this double action the lachrymal gland becomes a powerful auxiliary to respiration, and may be regarded as a supplementary organ for this function. It is also the principal source of the moisture of the nasal fossæ.—*London Medical Times and Gazette.*

Haschisch for the Expulsion of Tænia. By J. P. Root, M.D., Wyandotte, Kansas.—About the 1st of September, Mr. ———, a young man of intelligence, called at my office, stating that for several years he had been afflicted—to use his own language—"with intolerably irritating and nervous feelings," to allay which, he had resorted to all sorts of excitants and stimulants, large quantities of whiskey, strong tea, coffee, tobacco and opium in various forms had been used, vainly hoping thereby to find relief. As might have been anticipated, such folly only added to his misery. He had been tormented with a capricious appetite, starving occasionally, but oftener eating inordinately.

This state of things had continued thus far without any medical aid being sought. For several days before visiting me, he had become alarmed, by noticing in his stools numerous "short flat worms," a few specimens of which he brought me. These I found to be "joints" of the teniæ solium, and ordered a brisk cathartic of ol. ricini and ol. terebinth. The next day he informed me that large numbers of the "joints" were evacuated. At this time I learned that just before discovering these "ugly creatures," he had taken, as an experiment, several doses of haschisch. The idea occurred to me that this drug had disturbed the tænia. I accordingly advised a few days' rest from my medicine; after which, a large dose of haschisch, to be followed within a few hours by a cathartic similar to the one previously prescribed. The fourth day afterwards, my patient called to inform me that he took eight grains of haschisch with the cathartic as directed, which brought away, as he described it, "a quart of worms, most of which hung together like a long ruffle," as with a stick he "took up a good many yards of it." He felt no unpleasant effect from the haschisch.

About ten days from this date, he informed me that a few days previously, he recklessly took about fourteen grains of haschisch, thinking to make "a final sweep of it." About an hour after taking, he became alarmed, as a feeling of stupidity and drowsiness came powerfully over him. To relieve this, he drank a *drachm* of citric acid dissolved in water, which restored him to his normal feelings. The usual cathartic was taken, but no trace of tænia was seen, and has not been since. The young man seems permanently relieved. The haschisch used was a soft extract.—*Leavenworth Medical Herald.*

Carbolic Acid.—"What should be dispensed when saturated solution of carbolic acid is prescribed?"

Our correspondent propounds a query which, doubtless, has caused frequent annoyance to every careful apothecary, and one which must do so until physicians obtain a more exact knowledge of the article in question, and become more explicit in their prescriptions. Two medicinal solutions of carbolic acid are in common use; and what is lamentable, under the same title, viz.:—saturated solution of carbolic acid; while in composition they are diametrically opposed. This arises from a peculiarity in the solubility of the acid itself. The crystallized article may be perfectly liquefied by the addition of five per cent. of water, in connection with a gentle heat, when it forms what is frequently termed a saturated solution, or more properly, *liquefied carbolic acid.* This fluid is not capable of indefinite solution in water; indeed, the limit of its solubility at an average temperature is about five parts in one hundred of water. Here, therefore, we have two solutions known as "saturated;" one containing five per cent. *water*, and one five per cent. *acid*. And some physicians wish the former, while many desire the latter to be dispensed under the same title!

We can only advise that, in the absence of positive knowledge to the contrary, the weak solution, containing five per cent. acid, should always be supplied under the name of saturated solution. This procedure could only entail an error on the safe side, while a different interpretation might be followed by disastrous consequences.—*Pharmacist.*

Ill Treatment of a Lunatic.—The *Leicester Advertiser* contains an account of the ill treatment of a lunatic at Loughborough. The poor fellow, 60 years of age, was found by two Commissioners of Lunacy in an attic, crouching with his knees up to his chin upon an iron bedstead, completely denuded of every article of clothing, not a rag upon him, no bed or clothes except a piece of old cloth to lie upon. There he was, an attenuated piece of humanity, the picture of death, doubled up, and in a loathsome place worse than the grave. The floor had to serve for all purposes, being covered with filth, and emitting a stench worse than any charnel-house. The poor fellow was removed to the workhouse, and the persons who had charge of him are committed for trial.—*Medical Times and Gazette.*

Carious Teeth.—M. Magitot recommends the following formula:—Chloroform 5, laudanum 2, and tinct. benzoin 10 parts. Cotton wool imbibed in this to be inserted in the cavity, and renewed until insensibility of the part is produced, when the cavity may be definitively obturated.—*Rev. Méd.*

Medical Miscellany.

Pigmentum Nigrum.—Question for discussion at the American Medical Association:—Morbid symptoms caused by the development of colored pigment cells in the medical body corporate.

The argument of Prof. Simpson may give some comfort as a general statement of facts, but we much doubt if it will suffice to diminish the fears of any surgeon who has once experienced an accident similar to that which Simpson reports, and which he has sought to explain by causes independent of chloroform.—*Gazette Hebdomadaire*, March 25, 1870.

Compressed Air.—The St. Louis journals report that the effect of compressed air upon the men working in the caissons of the main piers of the bridge now building across the Mississippi, at that city, is highly injurious. Over fifty of the men engaged in filling in the air chambers with cement have been prostrated by partial paralysis. In some instances a few days' rest has been sufficient to restore the workmen to health; but recently four of the workmen have died, and forty are still in the hospital, some very low, but the majority in a fair way of recovery. At the coroner's inquest held upon one of the persons who had died, a fellow-workman testified that the men who observed strictly the sanitary regulations established by the engineers would not be injured, and that he never experienced any serious effects from the compressed air. The decease of his companion he attributed to intemperate habits. The use of spirituous liquors will undoubtedly weaken the lungs and render them unable to resist the pressure of two or three atmospheres.—*Medical and Surgical Reporter*.

Indications for Trephining.—According to Baron Larrey, trephining should be performed (1) in fractures of the skull with driving in of the fragments, (2) in fractures complicated with foreign bodies being driven into the cranial bones, (3) in various mechanical lesions of the head, such as produce compression of the brain from effusion of blood or pus, provided the local lesion is well defined. It should not be performed if the blood or pus does not appear to form a focus; nor when a substance which has entered the cavity of the skull is lost in the substance of the brain; nor in simple fracture; nor in prolonged coma; nor in epileptiform convulsions; nor in diffuse inflammation of the brain or its membranes. These conclusions are founded on the experience of his father.—*Dublin Med. Press and Circular*.

Spontaneous Combustion.—*L'Union Médicale* of the 15th of February, contains an article from the pen of Dr. Bertholle, wherein full details are given of a case of spontaneous combustion. The subject of it was a woman, 37 years old, who was addicted to alcoholic drinks. She was found in her room with the viscera and some of the limbs consumed, the hair and clothes having escaped. The very minute description of the state in which the deceased was found, shows that ignition could not have been communicated from without, and, to all appearance, this is an additional case to those already upon record.—*London Lancet*.

A 'Numble Apology.—We beg pardon for a *typographical* error, as we are fain to call it. We do not dare to hunt up our MS. to see whether it was a slip of the pen or of the types. At any rate we were made to say in a late issue that one of our most respected friends was "unsurpassed by none," instead of *and surpassed by none!*

To Correspondents.—Communications accepted:—Sudden Death Post Partum.—Congenital Malformation—Nickel Plating—Six Cases of Hernia.

Pamphlets Received.—Reply to Dr. C. A. Robertson's Review of the Report concerning the last Illness of Dr. Alden March. By James McNaughton, M.D., Professor of Theory and Practice in the Albany Medical College. To which is appended a Rejoinder for Dr. Robinson, made by Prof. Gross, of Philadelphia. Pp. 16.—The Strange Defence of Dr. James H. Armsby against the Criticism of his Report, considered by Chas. A. Robertson, A.M., M.D., Ophthalmic and Aural Surgeon at St. Peter's Hospital, and Surgeon of the Albany Eye and Ear Infirmary. Pp. 16.—Twenty-first Annual Announcement of the Woman's Medical College of Pennsylvania, 1870-71. Pp. 16.—Ninth Annual Report of the Board of Managers of the Woman's Hospital of Philadelphia, January, 1870. Pp. 16.—Valedictory Address to the Graduating Class of the Woman's Medical College of Pennsylvania, at the Eighteenth Annual Commencement, March 12, 1870, by Ann Preston, M.D., Professor of Physiology and Hygiene. Pp. 16.—Twelfth Annual Report of the Medical Superintendent of the Provincial Hospital for the Insane, Halifax, N.S. Pp. 58.

Died,—At Essex, 16th inst., Dr. Josiah Lamson, 80 years 8 months.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending April 23, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases	
		Consumption.	Pneumonia.
Boston	85	18	8
Charlestown .	12	2	1
Worcester . .	20	2	2
Lowell	11	1	0
Milford	3	1	0
Chelsea	2	1	0
Cambridge . .	13	1	0
Salem	14	5	0
Lawrence	4	0	0
Springfield . .	5	1	0
Lynn	7	1	0
Fitchburg . . .	5	0	0
Taunton . . .	7	4	1
Newburyport .	2	0	0
Fall River . .	9	2	0
Haverhill . . .	5	1	1
	204	40	13

Boston reports one death from smallpox. From all the above places there are reported six deaths from scarlet fever, five froom whooping cough, four from typhoid fever, three from croup, and two from measles.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending April 23d, 85. Males, 46—Females, 39.—Accident, 2—apoplexy, 1—disease of the bowels, 1—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 2—bronchitis, 1—cancer, 1—consumption, 19—convulsions, 2—croup, 2—debility, 1—dropsy, 1—dropsy of the brain, 4—scarlet fever, 1—typhoid fever, 4—gastritis, 1—disease of the heart, 4—infantile disease, 1—intemperance, 1—disease of the kidneys, 2—congestion of the lungs, 2—inflammation of the lungs, 6—marasmus, 4—old age, 3—paralysis, 2—premature birth, 3—puerperal disease, 2—pyæmia, 1—rheumatism, 1—scrofula, 1—smallpox, 1—suicide, 1—teething, 1—unknown, 4.

Under 5 years of age, 29—between 5 and 20 years, 6—between 20 and 40 years, 27—between 40 and 60 years, 8—above 60 years, 15. Born in the United States, 53—Ireland, 24—other places, 8.

THE

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Original Communications.

SPASMODIC ACTION OF THE ABDOMINAL MUSCLES SIMULATING THE MOTIONS OF PREGNANCY.

Read to the Boston Society for Medical Improvement, Jan. 3d, 1870, by Dr. C. G. PUTNAM.

MISTAKES in regard to the existence, whether of fancied or imputed pregnancy, are sometimes unavoidable, not only in the early but in the later months. Yet a correct diagnosis may be most essential in saving the practitioner from obloquy—the married from inappropriate treatment or the unmarried from ruinous suspicion.

In the present case the phenomena were unusually persistent—covering a period of eight years and, though to a certain extent characteristic of the affection, were sufficiently obscure to make the diagnosis doubtful. The patient was 40 years old, well proportioned, of healthy appearance, dark hair and eyes, the mother of three children. At my first visit the enlargement of the abdomen appeared to be that of the full period of gestation. I noticed the frequent occurrence of abrupt vertical motions so strong, at times, as to jerk the whole trunk of the body, and cause her to "catch her breath." Occasionally she swayed from side to side, as if compelled to yield to heavy lateral plunges within. She thought herself to be near the close of pregnancy, and a short time previously the late Dr. Gay, who requested me to take charge of the case, had passed a night in the house in expectation of the parturition. I made a cursory auscultation, but heard only the intestinal sounds, and without further investigation left her, with the presumption that she was on the eve of confinement.

On my next visit a thorough, careful auscultation satisfied me that there was neither soufflet nor fœtal pulsation. I then ascertained that the texture and length of the neck of the uterus were not changed, and that the uterus was not materially, if at all, increased in size, so that if there was an ovum it was not, at least, intra uterine. This was in February, 1850. Upon questioning, she then said that her last child was born in February, 1846, weaned in April, 1848. Menstruation immmediately occurred and continued till July, 1848. In May, 1849, she was as large as at the full term. In December, 1849, seven months afterward, had a fall, flowed profusely, and supposed she had miscarried.

From this point the record of the case went on as follows:—May 31st, 1850.—Menstruation now present. Has suffered from "bearing down." Os and cervix uteri less firm than before. Externally a sulcus an inch and a half broad and about an inch deep, extends from three inches above to three inches below the umbilicus, which latter is thus in a deep groove or pit. Abdomen more prominent on the left than on the right; resonant on percussion. The breasts enlarged and tender; follicles of areolæ turgid and moist. July 28th, 1850.—The sensation of distention "cramming" in the abdomen is so great as to cause faintness. No change in the cervix or fundus. Abdomen now more prominent on the right. September 7th, motion less, but the feeling of distention greater.

March 25th, 1852.—For the last nine months has been gradually but very decidedly lessening in size. Menstruation has recurred. May, 1852.—I find the size increasing. The motion is violent, and on pressing the abdomen a solid body, apparently, rolls under the hands or is thrown from side to side, as if from an alternate action of the recti muscles. Jan. 1st, 1853.—No menstruation since July, 1852. Nov., 1853.—Constant pain in back and limbs—cannot lie in bed for more than an hour—often passes the night in her chair.

Let us recapitulate for a moment, and fancy the patient before us. A brilliant brunette, above the medium height, naturally symmetrical in figure. The abdomen enlarged as at the full period of gestation—rounded except at the umbilicus, which lies in a deep groove. We see her jerked in her chair by movements apparently intra-abdominal, that no one at first sight would hesitate to call those of a fœtus in utero. On further investigation we find not an elastic uterine tumor, but a resisting doughy mass, heaving and rolling under the hands. We find that the breasts are enlarged, the areolæ dark, the follicles moist and turgid, that the menstruation is irregular and not precisely dated. The size, weight, and mobility of the uterus apparently normal, the cervix varying a little in density from time to time. Upon auscultation, that there is neither souffle nor fœtal pulsation. We find the resonance of the abdomen, on percussion, varying occasionally, but no sharply defined limits of dulness and resonance that we should expect in advanced pregnancy.

Cases are occasionally met with in which pregnancy is suspected where it does not exist, and others in which, when present, it escapes detection in spite of careful scrutiny. In the present case intra-uterine fœtation seemed scarcely possible. If extra-uterine, the fœtus and appendages, instead of presenting a somewhat defined and movable tumor, would probably have been in a fixed position and of irregular form, and would necessarily have given rise to pain and constitutional irritation.

Enlargement of the ovary was of course one of the first suggestions, but the sensation conveyed, on pressure, was not that of a defined mass, and the resonance on percussion was inconsistent with the presence of so large a tumor, whether solid or encysted. The uterus was not displaced, as it probably would have been by the pressure of any large tumor. There was nothing in the complexion or state of health that would lead to suspicion of mesenteric disease. In the absence of any hint to be derived from disturbance of function a fatty degeneration of the omentum was suggested, but against this supposition was the enlargement below as well as above, and resonance where there should have been dulness on percussion.

During the investigation, in which I had, on various occasions, the assistance of gentlemen of note, at home and abroad, two opinions chiefly prevailed. 1. That the motion of the abdominal muscles indicated the presence of a living body within. 2. That it was merely spasmodic, and was caused by the pressure of some adventitious tumor. She herself, amply familiar with the symptoms of pregnancy, insisted on that condition. An imperfect kind of menstruation was made to tally with this idea, and when the ordinary period of gestation had passed, when expectation had failed and prophecies had been belied by the event, she would fall back on the possibility of extra-uterine fœtation, and the inception of another pregnancy, for, although usually fatal, it could not be denied that a few had outlived such an accident, and afterwards passed through healthy parturition. Of course there were not wanting friends to narrate such facts and encourage hopes that she never utterly abandoned.

On the last of October, 1857, she was suddenly attacked with painful vomiting and retching, great distress and jactitation. The liver could be felt below the edge of the ribs. Jaundice ensued, and without mitigation of symptoms, continued till her death, which took place in a fortnight after this acute attack.

At the autopsy there was found—nothing: that is to say, nothing to account for the chronic affection. The abdominal parietes were somewhat more than two inches in thickness. There was enlargement and granulation of the liver, of recent origin. There was a degree of adipocerous transformation in the omentum, but it did not affect its size, and could not be associated with nor explain the phenomena. No unusual distention either of the large or small intestine. Uterus and appendages normal.

HOMICIDES BY CHLOROFORM.

By Innominatus.

To an article with the above caption in a former number of this Journal the Editor of the *British Medical Journal* has recently replied as follows :—

"*Anæsthetics in America.*—Our recent articles on chloroform accidents have excited considerable attention in the United States. An anonymous writer in the Boston Medical and Surgical Journal, an advocate of the use of ether, heads his article 'Homicides by Chloroform,' and reprints our memoranda as a warning in reference to the dangers which attend that anæsthetic. He asserts that ether is an agent 'equally effective, and known to be perfectly safe.' He suggests that 'a trial for manslaughter with a New England jury would bring British practitioners to a quickened sense of responsibility in the matter.' We should be glad to know whether it is not the fact that chloroform is very largely used in the United States. In some hospitals there its use is, we believe, prohibited by rule ; but we have been informed that, in some instances, the surgeons who are thus compelled to use ether for their hospital patients, almost always employ chloroform for their private ones. If this be so, it amounts to strong testimony as to the practical inconvenience of ether-inhalation. The subject is a very important one, and we shall be glad of information from a candid and dispassionate source. The article from which we have quoted reads too much like the production of a partisan."

These requests of the British Editor Innominatus "would be glad" to answer—premising, however, that he is not a surgeon, and has no interest in the matter, other than the establishment of the truth, which he most earnestly seeks and advocates. In no other sense is he "a partisan" of this or any other medicinal agent; and the appearance of partisanship, if any as charged, is due to the force of the facts themselves, and not to his advocacy.

It is true that years ago the use of chloroform for anæsthetic purposes was forbidden at one of the New England hospitals by its Trustees, after a number of severe "accidents" caused by that article, some of which were fatal. But, so far as Innominatus can ascertain, and he has made diligent inquiries, no one of the surgeons or medical officers of that institution ever employs chloroform for anæsthetic purposes in private or public practice. Innominatus cannot learn that any such rule has been adopted in any other New England hospital. "The United States" is a large territory, and there are a great many hospitals in it; some may have adopted the rule spoken of, and possibly some of their surgeons may employ chloroform in their private practice, as alleged by the British Journal; if so, the more's the pity—but Innominatus has not yet been able to discover their local habitations, or their names.

It is a pity also, and pity 't is 't is true, that trustees, and not medical men themselves, should ever feel obliged to make such rules to restrain practitioners; or that physicians should ever, here or in Britain, be guilty of reprehensible practices in their own calling that compel the public to interpose measures to protect themselves. But we can assure the British Editor that the use of chloroform as an anæsthetic is fast declining in New England, and probably also throughout the United States; and that so strong are the convictions of the most eminent in the profession hereabouts of the unnecessary hazard to which life is subjected by administering chloroform for anæsthetic purposes merely, that in a fatal case therefrom a medical defendant would not, in face of their testimony, be secure from a verdict of homicide under legal process.

"The practical inconvenience of ether-inhalation," the Editor speaks of, has always been greatly overrated, and has of late been much diminished. As to the practitioner, it never did at all compare with the multitudinous disadvantages indicated in the necessary precautions in the administration of chloroform, as enumerated in the "Memoranda" of the British Journal. As to the patient—of what account are "inconveniences" when safety is at stake! Here there can be no comparison. It cannot be too often, or too strongly repeated that while hundreds of deaths are conceded to have occurred from the inhalation of chloroform, not one has as yet with any show of reason* been attributed to the inhalation of ether. There were three thousand administrations of ether by inhalation for all purposes in *one* of our hospitals *last year*, and a similar number yearly for twenty years past, without serious "inconvenience," or a single death. The same may be said of our other hospitals, at some of which the number of yearly administrations of ether by inhalation cannot be much less.

For the rest, this paper cannot be terminated better than by a few extracts from an article by M. Petrequin, of Lyons, translated for and printed in this Journal, Oct. 3d, 1867. M. Petrequin cannot be suspected of local prejudice, or of being "a partisan" in this matter.

"The choice between ether and chloroform for anæsthetical purposes must rest upon experience. In the history of the two, ether has made notable progress—both in methods of administration and in purification. Complete anæsthesia can be produced by it with certainty and safety. It is not so with chloroform! No method of administration has removed its dangers, and no purification of the agent has secured safety. In fact, it has not made progress in either respect, and still continues year by year to furnish its numbers of victims.

"Inasmuch, therefore, as ether is equally effective in all cases, and has not the dangers of chloroform, it is, in strict logic, an imperative duty to use ether instead of chloroform as an anaesthetic. * * * *

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* A single illustration will suffice. It appears that in this vicinity a young woman, who had become almost idiotic from long-continued epilepsy, the paroxysms of which had been repeatedly mitigated and the fatal termination averted by the inhalation of ether, recently died in a paroxysm which ether could not subdue. This is gravely reported as a death from ether. The editor of a distant Journal, through which we first heard of the case, himself an advocate of chloroform, adds:—" it seems to us that the fatal result was due to advancing cerebral disease rather than to the anæsthetic."

"Impurities may render etherization laborious, disagreeable, complicated with nausea and nervous excitation, but are not in themselves essentially dangerous. Besides, all these impurities may be removed by washing and subsequent distillations carried to the required rectification. * * * *

"The danger lies in chloroform itself. If it kills, *it is because it is in its nature a poison*.

"In the actual state of science, then, the only way to avoid the censure of society, to secure the protection of justice, and above all, to remain at peace with one's own conscience, is to discard forever a dangerous agent, which, every time that it is used, puts at hazard the fearful question of life or death."

CONTRIBUTIONS TO PATHOLOGY AND PRACTICAL MEDICINE.

By John P. Mettauer, M.D., LL.D., of Virginia.

Genito-Seminal Neuropathia.

This disease has been variously termed progressive locomotor ataxia; tabes dorsalis; Duchenne's disease; myelo-phthisis; progressive spinal paralysis; Todd's disease; locomotor ataxia; partial paralysis; progressive locomotor synergia; atrophy of the posterior columns of the spinal cord; and some others; and has been long known to the profession, but comparatively imperfectly understood as to its causation and nature. More than thirty years since Romberg decribed the disease, and perhaps first grouped together its symptoms. So early as 1837, Cruveilhier, in his pathological anatomy, reports cases of the disease, and after stating the symptoms, describes the anatomical lesions as consisting of a yellowish-gray transformation of the posterior columns of the spinal cord. The opinions of Romberg in regard to the nature of the disease were generally adopted in Europe, yet in France the appellation of Duchenne's disease was bestowed upon it.

Since the publication of the paper of Duchenne in 1858, many valuable contributions have been made to the literature of this affection, both at home and abroad, going to prove that genito-seminal neuropathia is not a new disease.

The earlier writers, with Romberg and Cruveilhier at their head, regarded the disease as tabes or atrophy of the posterior columns of the spinal cord, and that its phenomena are due to fixed organic lesions. Others, especially those of the Trousseau school, considered it a neurotic affection, and that the structural changes met with are merely incidental complications, or the results of the disease under certain circumstances. Such opposite views in regard to the presence or absence of anatomical lesions in this disease are not more remarkable than in some others which have been examined *post mortem*, and they are to be reconciled by referring them to the different periods or stages of the disease at which the examinations were made, or perhaps to the imperfectness of such examinations. That lesions of structure do occur in this disease the writer has not a doubt, and he believes also they may be present in such degrees as not to be recognizable. There may, even, be lesions of function, in which the molecular disarrangement of the organism is so slight, as only to be detected by the perverted functional exercises during life. Indeed, there are good reasons for the belief, that progressive locomotor ataxia, in a majority of cases, consists, primarily, in perverted functional impressibility and innervation chiefly, structural metamorphoses only following as accidents when they do occur.

This disease was early regarded as a form of paralysis, or as partial paralysis, and was denominated by Sir Charles Bell as such, but distinguished from absolute palsy as a simple inability to coördinate muscular acts, in which there was no defect of power, but simply a want of harmony and consent of action of the implicated muscles, or ataxia musculationum. The views of the writer are in accordance with Sir Charles Bell's, as they relate to the irregular action of the muscles of locomotion, and in regarding the morbid condition as paralytiform, but differing from true palsy in its characters and causation, as well as in its development. The essential character of this affection, so far as it can be inferred from the symptoms and conjectural causation, seems to be neurotic; and perverted innervation, both sensory and motory, probably is the morbid condition. This abnormal state seems to depend upon exalted functional impressibility, both sensory and motory, with more or less impairment of the vital tone, and it may continue for a length of time before it reacts upon the organs of locomotion. Finally, these last are implicated, and incoördinate movement is the form under which the morbid condition is manifested. The will now has lost its power of controlling muscular action in greater or less degrees, and the disturbed condition of the functional sensibilities has impaired proportionally the coördination of relation subsisting naturally between the impelling and subordinate forces. Locomotion now is imperfectly executed, and is more or less unsatisfactory; the mental exercises are disordered in various ways and degrees, sight is impaired, as well as hearing, and, now and then, general feeling is more or less perverted, being sometimes unduly exalted, while at others it is abnormally depressed.

Being chiefly a nervous affection, the perverted action continues for a length of time without disturbing the coördination of muscular acts, or the molecular arrangement of the organism, so far as to give rise to structural metamorphosis. As the disease continues, various symptoms are developed, chiefly of a neuralgic character, particularly shifting pains of the loins, hips, groins, testes, extremities lower and upper, head, face, neck, chest, and uterus with females. At the same time there is usually more or less general nervousness; yet, in a large majority of cases, little, if any disturbance of the locomotive exercises is to be observed for a length of time, only so far as pain may be concerned. Even when pain is elicited, by attempts at locomotion, the will has complete control in impelling, or restraining musculation; and the withholding of the volitional effort is due to the exercise of that faculty and not ataxia or any form or degree of paralysis. When ataxia sets in, it is probable, decided lesion of functional impressibility, or of structure, may have resulted, which, in either case, would tend to impair functional, as well as organic exercise of the nerves and muscles, and proportionally, also, the normal relations subsisting between them and the powers of volition. That continued disturbance of functional exercise tends both to disorganize functional impressibility, and to produce change of structure in the organs affected, can readily be conceived; and such conditions may characterize genito-seminal neuropathia when it advances to the stage of progressive locomotor ataxia. In its early stages it seems to be chiefly, if not wholly, a nervous affection, closely assimilated to neuralgia; while at a more advanced period it puts on fixed characters, due probably to structural changes developed in the implicated organs during its progress. And it may terminate in paralysis, more or less completely formed, if permitted to pursue its course uninterruptedly.

The causation of genito-seminal neuropathia is veiled in much obscurity. For a number of years the writer has had much to do with it, both with males and females, and besides treating the disease he has been at great pains to investigate everything relating to it. Seminal weakness and spermatorrhœa are the appellations often bestowed upon it, and in the region of country where the writer resides, it is known by those names only. The denomination adopted by the writer is not faultless, but, according to the pathological views from which it is deduced, is equally as applicable as any now in use, with the exception, perhaps, of spermatorrhœa.

The origin of this interesting disease, according to the investigations of the writer, is the genito-seminal organs. In a vast number of cases the disease has been satisfactorily traced by him to those organs; and the treatment, taken in connection with clinical histories of cases, if a doubt existed, would remove it. Careful investigations establish clearly that the seminal orifices, ejaculatory ducts, and seminal vesicles, are jointly the seat of this disease. In some unexplained manner these delicate organs become sources of irritation, which is communicated to the economy at large, but especially to those portions of it sustaining the closest relations with the genital system in a normal state; and the irritation seems to consist of undue functional impressibility, without any declared tendency to superinduce inflammation in the organs primarily or secondarily affected. Throughout its course the nervous character originally impressed upon it is retained, and can be readily distinguished; yet its intensity is sufficient to disturb the entire economy in greater or less degrees, and if not remedied sooner or later may end in death. It seems to act through the functional sensibilities chiefly, and hence results the very gradual impairment of the constitutional health, with comparatively slight distinguishable disease in any particular organ for a length of time.

The cause of this irritation of the genito-seminal organs evidently must be deduced from their exercise. In many instances, with patients treated by the writer, excessive sexual intercourse has seemed to have induced it; and then, again, cases have occurred in which there was no reason to suspect such indulgence, or the practice of self-pollution. It is very possible that mental onanism, in the form of nocturnal pollutions, may induce it, but it is more probable those emissions are the result of preëxisting irritation of the seminal organs. Lascivious thoughts induced in any manner, if often indulged, or of prolonged continuance, may, finally, give rise to it, and very probably more frequently than suspected. The severe pain of the testes occasionally following the excitement accompanying such desires, gives evidence that sexual appetence ungratified can produce painful irritation of at least a portion of the genital apparatus. Indeed, the writer has witnessed examples of hernia humoralis from prolonged sexual appetence ungratified, of severe character.

It is not improbable that any undue venereal excitement, whether due to mental influences or copulation, is capable of inducing the irritation in question. In some instances the complete development of the genital organs has seemed to engender with them an irritated state of their functional exercises, manifested by the phenomena which usually accompany spermatorrhœa, and when there was no ground to suspect that onanism or copulation had been indulged in. Such individuals, it would seem, were not formed for sexual intercourse, or for the work of procreation. They seem to resemble certain classes of insects, which perish as soon as they have impregnated their female partners; and the writer has met with such examples with both sexes, but most frequently with females.

Why the exercise of the genital organs subjects them to a disease, irrespective of that from contamination, can only be conjectured. Very probably, like other organs of the human body, they are liable to have their functional actions disturbed, and actual perversion to follow, from undue exercise of them; or if they are exercised under improper circumstances. With individuals of delicate constitution, moderate indulgence in sexual intercourse might produce the irritation in question, as such indulgence would probably be undue under the circumstances. And sexual intercourse too soon after a severe illness, especially if protracted, would probably be followed by like results. It is probable, in a majority of instances, that delicacy of constitution and excessive sexual indulgence are the most prolific causes of this irritation; and the writer will state that the disease is, in a peculiar manner, incident to individuals of strumous constitutions, in which a predisposing delicacy may be supposed to reside.

Irritation set up in other organs and reflected upon the genital system may originate this erethism, and probably it is after this manner that injuries of the loins from overstrain cause certain forms of blennorrhœa, or gleet. In these cases the muscles of the loins reflect the irritation set up in them by the over-train, through the spinal medulla, kidneys and ureters, upon the seminal orifices of the ejaculatory ducts. Concussion of the spinal medulla from falls, or blows, may also induce it, although the writer has seen no such cases. And catarrhal disturbances, especially those forms tending to develope rheumato-neuralgic irritations, are likewise occasionally succeeded by it. Such causes, however, are not to be regarded in any other view than purely incidental or possible agents in the production of genito-seminal irritation, with the exception, perhaps, of gonorrhœa, which the writer inclines to believe has occasionally induced it; and once established, no matter how produced, its tendency is constantly and progressively to implicate the economy at large. That the irritation is not inflammatory, but chiefly if not wholly nervous, the writer confidently believes; and such characters are imparted to it, in all probability, by the purely nervous excitement which accompanies the copulative act, or even intense venereal desire without intercourse. The irritation is also accompanied with more or less debility, or exhaustion of vital tone, seeming to be merely a prolongation of the feeling of lassitude or languor so constantly following sexual intercourse, or even masturbation; and it retains these characters throughout its entire course, in greater or less degrees of perfectness. Even after it has invaded the economy so far as to set up in contiguous as well as remote organs disturbances more or less intense, such as pain of various descriptions; immobility, enfeebling and wasting of the muscles; impairment of sight, hearing, smelling, appetite, digestion, and of the intellectual exercises, the nervous character of the erethism is greatly predominant. And in the cases which, *post mortem*, have presented anatomical lesions of the spinal medulla and nerves, the irritation seems to have retained its nervous character. This character of the irritation is decidedly marked, even when other causes induce it besides those strictly venereal.

Two forms of this disease are recognized by the writer—that is, the simple and complicated, with their variations, which will next be described; and first:—

Simple Genito-seminal Neuropathia.—This form is most frequently met with, and in the experience of the writer the ratio might be stated at ninety-five per cent. Cases of this description are not in reality simple and devoid of complications, but are generally so little so as to justify their distribution under this head. In strict propriety no disease is to be regarded as absolutely simple. The irritation in this form is confined chiefly to the genital organs, manifesting itself in slight functional disorder of the genito-urinary organs, and often attended with weakness or pain of the loins and hips. Digestion is often impaired as well as the appetite, and constipation is rarely absent. From its earliest beginning the disease reacts upon the mind; hence depression of spirits, more or less incapacity for business pursuits, and desire for solitude are generally early attendants. Perhaps the first noticeable symptom is increased desire to urinate, more particularly observable at night after retiring; and this is not unfrequently accompanied with some unusual sensation, such as scalding, aching, itching, and post-urinary dribbling. In some cases marked hesitancy precedes the commencement of the flow, and the stream is often unduly small and feeble. Seminal losses, both after urinating and during defæcation, are frequently to be observed. Sexual desire is generally impaired, as well as the erections, but cases occasionally occur in which both are unduly increased. Emaciation very soon takes place, and the whole appearance, as well as the manner of the patient, indicate that he feels unwell. In a peculiar manner the countenance expresses the uncomfortable state of the patient's feelings, being a kind of facies prostatica, from which the writer has frequently inferred the condition of patients before asking a question. There is often a gleety discharge.

As the disease advances the symptoms which have been enumerated gradually deteriorate, and with the augmentation of the urinating desire there will often be increase of pain, followed by urethral hæmorrhage in variable degrees of intensity. In some cases the prostatic portion of the urethra, as well as the cervix of the bladder, become so sensitive as to give rise to most distressing strangury, nay, even to incontinence now and then, as well as perineal tenderness to the extent of rendering it painful to rest that region on a firm seat. The pain of the back, hips, groins, testes, lower and upper extremities, head and chest, has, generally, now, materially increased in severity—not, however, in the different locations which have been named simultaneously, but in one or more of them; yet locomotion, clearly, is impaired only so far as pain is concerned in attempts at motion, the will having complete control of musculation. Notwithstanding the acute suffering often experienced, very slight, if any, fever can be recognized. The secretions, for the most part, are not perceptibly diminished, and thirst, so constantly the attendant of fever, is rarely if ever present. Restless nights, and gloomy, unhappy days often spent in retirement and seclusion from friends as well as from general society, greatly aggravate the sufferings of patients, which are in a great degree imaginary or magnified, and it is the desperation engendered by such a conflict of feeling that often drives them to suicide or to madness.

Such are the symptoms which characterize the simple form of this disease most commonly; yet they vary much in intensity. In some cases they are so slight as with difficulty to be recognized without exploring the urethra with a sound, and the globe-finished instrument has generally been employed by the writer for the purpose. In a majority of instances, however, little difficulty will be experienced in the diagnosis, but exploration should never be omitted, as it satisfies both physician and patient as to the existence of the disease, which now and then is of much importance when the patient is both timid and skeptical. The exquisite tenderness of the orifices of the seminal ducts, as the globe of the sound passes over them, felt by patients, will remove all doubt of the existence of disease in those orifices.

The *complicated form* is distinguished by most of the phenomena of the *simple*, but differing from it by reason of certain complications which are developed during its progress. Impairment of memory, sight, hearing; impaired locomotion from severe pain, or from incoördination of muscular action from impaired volition, or ataxia musculationum; enlarged prostrate; ulceration of the vesical mucous lining; hæmaturia; impotence; insanity; and ulceration of the os and cervix uteri of females, are the chief complications of this form. Impaired memory, sight, hearing, and locomotion in some degree, often occur in the simple form, as already stated, and may properly be regarded as common to both forms; while the other complications which have been enumerated belong almost exclusively to the complicated, as far as the observations of the writer enable him to decide.

Whether these complications are due to pathological changes of the molecular arrangements of the organism, or to long-continued perversion of functional exercise, cannot positively be determined, especially as to some of them. It is probable, however, that more or less organic change exists in every case. As to some of the complications, there can be no doubt of the existence of structural changes. Of the common complications it will not be necessary to do more than refer to them, as, generally, they do not demand any specific treatment differing from that employed in the simple form. Those involving locomotion in incoördinate muscular acts, together with hæmaturia, enlarged prostate, and ulceration of the uterus of females, demand particular attention. Incoördinate musculation is the most interesting and important, by reason of its tendency to impair locomotion, and even to result in paralysis more or less completely formed. This complication has not, in the experience of the writer, been followed by complete impairment of locomotion, but only incoördination of the muscular acts, so far as to render their exercise imperfect and unsatisfactory; and his cases have displayed it chiefly in the lower extremities; yet in a few instances it has appeared in the upper, and both regions presented the incoordination in variable degrees of intensity. Imperfect obedience of the muscles to the powers of volition, or inability of those powers to coördinate in locomotive efforts, seems to constitute the morbid condition upon which this complication depends. But the precise manner of its causation cannot be so easily explained. In some unknown manner the irritation of the genito-seminal organs is reflected upon certain nerves and muscles concerned in locomotion; and, either by perverting their functional sensibility or otherwise, sets up in them a morbid condition which, in greater or less degrees, renders them insusceptible of the inspiratory influences of the will in directing as well as in restraining their actions. The functional exercises of the genital organs in a normal state, during sexual congress, in a remarkable degree call into sympathy very nearly if not all of the organs of the body; and when these exercises become perverted, or put on morbid conditions, it is probable those conditions, or irritations, obey the same sympathetic laws which governed in a healthy state in their diffusion throughout the economy. Why they should be transferred to the organs of locomotion so frequently can only be conjectured; such, however, is the case, but fortunately only in moderate degrees in a large majority of instances; and the reflected irritation is purely nervous, or probably a form of neuralgia, constituting the disease termed progressive locomotor ataxia—or, as the writer denominates it, genito-seminal neuropathia.

This complication is incident to the advanced stage of the neuropathia, and the paralytiform condition varies much in intensity, the implicated muscles being affected with every conceivable degree of immobility, from the slightest disorder to almost complete paralysis. The irregular action of the muscles, however, seems due more to incoördination than to paralysis of the muscular acts; and with all of their disordered action there seems generally to be no deficiency of power. In some unexplained manner the will has lost its normal control, by reason of which the muscles act irregularly in various ways, and this condition is kept up doubtless by the genito-seminal neuropathia.

It is probable this complication may mark the period at which pathological changes take place in the organs of locomotion, especially the spinal medulla, and it may even be due to those changes in a great degree, which, without, would not occur. This complication, as already intimated, displays paralysis more or less completely formed.

Hæmaturia.—This complication is of rare occurrence, and when present generally exists in slight degrees of intensity. It is often attended with more or less vesical pain during micturition, yet in many cases little, if any, is experienced. The discharge of blood usually takes place at the times of urinating, and seems then to depend chiefly upon the contractions of the bladder, as the blood is red and fluid, and the quantity small, the hæmorrhage ceasing very soon after the bladder is at rest. In these cases the blood seems to be effused from the cervical portion of the vesical cavity. When free hæmorrhage occurs the blood sooner or later causes its expulsion by distending the bladder unduly, and the blood then is dark, and more or less coagulated. If the coagula are large, considerable difficulty will often attend their escape through the urethra. Copious hæmorrhage may take place from the cervix of the bladder, from the cavity proper, or from one or both kidneys. In some instances very free hæmorrhage has been yielded by enlarged, or a granular state of the ejaculatory seminal orifices. This is occasionally a very unpleasant and troublesome complication, especially when confined to the vesical cavity.

Enlarged Prostate.—In very many cases this complication is met with, and, generally, impresses upon the parent disease characters more or less unfavorable. It occurs, in a majority of instances, with the older description of patients, but is occasionally also met with in quite young persons. In either case, it never fails to increase the depression of spirits, and thus may augment the mental suffering of its unfortunate subjects. Exploration through the rectum with the index finger, and through the urethra with a sound, will generally detect the enlargement. The former is most to be relied on, but urethral examination should likewise be employed, as it also indicates the capacity of the urethra. When considerable it impedes urination, and invariably interferes more or less with the treatment of the original disease.

Ulceration of the Os and Cervix Uteri.—In a good many instances the writer has met with this complication, both with married and single females, but he has not been able to satisfy himself whether the ulcerations existed as accidental coincidency, or in the relation of cause and effect. Whether the product of the neuropathia, or accidentally coincident with it, the cure of the ulceration has, in some extremely interesting cases, been followed by complete and prompt relief of the neuropathia; and in this connection it may be stated that females, both married and single, are very nearly as liable to genito-seminal neuropathia as males, except in the ataxia form involving locomotion.

Ulceration of the Mucous Lining of the Bladder.—In some instances this condition of the bladder coëxists with genito-seminal neuropathia, and rarely fails to impart to it much additional perplexity as well as suffering. It is often attended with severe pain of the bladder, which is increased by urination; nay, even the filling of the organ with urine gives rise to pain. The urine is generally loaded with muco-pus, and not unfrequently contains oxalates as well as phosphates of lime also. Hæmaturia likewise accompanies this complication. In some instances fever of hectiform character attends, but it is slight, and the nervous element preponderates. It is difficult to determine whether the ulceration is caused by the diffusion of the prostatic erethism through the vesical mucous lining, or is the result of the oxalatic condition of the urinary secretion. An oxaluric state frequently characterizes the urine in genito-seminal neuropathia, and the ulceration of the bladder is possibly due to that cause. The urine is generally offensive, and deposits a heavy sediment of a dingy-white hue. In some cases the ulceration extends entirely through the urethra to the meatus.

Impotence.—In many instances the sexual appetency, as well as the erecting power, are so completely perverted as to render males impotent wholly, or in a great degree. Very often females also suffer great impairment of sexual desire, and while the disease continues refuse positively to indulge in sexual intercourse, declaring at the same time their utter disgust and aversion for it. This complication is due to the more or less complete disturbance of the functional innervation of the genito-seminal organs, by reason of the perversion of their functional impressibilities. It may accompany either form of the neuropathia, and is generally remediable.

Insanity.—In a few instances the writer has met with this complication in slight degrees, and he inclines to the belief that it is the cause of many of the suicides, both with males and females. It is incident, in a peculiar manner, to cases in which seminal weakness is present, characterized by frequent discharges of semen at stool, and by nocturnal pollution; and also, when the erections are defective or totally wanting, while sexual appetite is more or less unabated. The cases witnessed and treated by the writer were interesting, although slight, and yielded readily to the treatment employed for the correction of the parent disease.

Treatment.—This may be distributed into preparatory and curative, and the methods embraced by this arrangement have been adopted for many years by the writer. In many cases more or less preparatory medication will be required, for the purpose of restoring solubility to the bowels, and to refresh and to equalize the secretions generally. For these purposes mild impressive cathartics will, in most cases, be found to meet the indications fully, aided by a restricted diet both as to quantity and quality of food, and freedom from improper mixtures. One or two of the pills of the subjoined formula, taken at ordinary bedtime, and repeated if necessary, will generally meet the indications.

℞. Aloës socot., ʒi.;
Pulv. jalap. rad., ʒij.;
Pulv. colocynth. pulp., ʒss.;
Aq. fontan., q. s.

Make xxiii. pills. Sum. i. or ii. at night.

If the secretions ameliorate reluctantly, one grain of ipecacuanha may be united with the pills at night, and repeated until the desired effect is produced. After the bowels seem to act properly the pills need only to be given when necessary, and the rule adopted by the writer in such circumstances has been to give the pills at night if no action from the bowels has taken place during the day.

In some cases when the digestion is much impaired and the stomach disquieted by acidity, chalk in water in teaspoonful doses after meals, or the aloe bitter after dinner and at bedtime, affords much relief.

℞. Aloes, ʒijss.;
Sod. supercarb., ℥ivss.;
Spirit. lavend. compos., fʒij.;
Aq. fontan., ℥x.

Dose, one drachm bis in die.

Frequently this may be used both as antacid and aperient, without the pills. Now and then, when the appetite is greatly impaired, the use of the nitro-muriatic acid mixture, an hour or so before meals, proves highly beneficial in doses from seven to twelve drops, largely diluted.

℞. Acid. nitric.,
Aq. pur., } āā f℥ss.
Acid. muriat.,

Dose, vii. to xii. gtt. bis vel ter in die.

In few cases will the use of mercurials be found necessary. Gentle demulcent diuretics can seldom be dispensed with, while those of active powers should generally be inhibited. A carefully regulated diet, somewhat restricted as well as simplified, should generally be enjoined. Only three meals per day should be allowed these patients, and such as are more or less dyspeptic would do better with only two. Solid animal food and milk taken into the stomach at the same meal, in the opinion of the writer, are incompatible and should be inhibited, especially with patients subject to indigestion. It is of the first importance that persons laboring under this disease guard against catarrhal influences, as they invariably aggravate it.

Curative Treatment.—This necessarily must be constitutional and topical. The medication advised in the preparatory treatment will in a great degree be applicable to this as auxiliary to topical means, which are to be relied on chiefly. A soluble state of the bowels must be carefully maintained, gentle diuretics will be required, the secretions as far as attainable should be kept free, and the diet restricted and carefully regulated. In a majority of instances it will be necessary to employ also eutrophics, such as deobstruents, stimulants and tonics. As a deobstruent the nitro-muriatic acid mixture is to be preferred, which acts also as a potent secernent chologogue. This valuable remedy will be particularly applicable when the biliary secretion is defective and when the appetite fails It will also be demanded in the complications from enlarged prostate, and when the urinary secretion is accompanied with an oxaluric condition. Even in locomotor ataxia it will be allowable and proper in reference to its deobstruent action; and when employed should be given in the doses and forms of administration advised in the preparatory treatment.

Stimulants and tonics will be demanded in cases attended with feeble pulse, and frequent fits of low spirits, or nervous pain; and when there is deficiency of organic tone or an anæmic condition. Brandy variously served up is the most suitable stimulant; while the cold infusion of wild-cherry bark—prunus Virginiana—tincture of nux vomica, porter, phosphate and iodide of iron, and the simple tincture of gentian, are to be preferred as tonics. These measures, however, are in a degree to be regarded chiefly as auxiliary to the topical treatment which is our chief reliance.

The topical remedies which promise most benefit, and from which cures chiefly result, are the nitrates of silver and copper. In a large majority of the cases treated by the writer, the nitrate of silver has been preferred; but examples, now and then, have come into his hands, which yielded readily to the nitrate of copper, after having been treated unsuccessfully for a length of time by its kindred preparation the nitrate of silver. The former seems to impress the structures upon which it acts more profoundly than the latter, and, on that account, probably, is better adapted to cases of some standing, in which the textures of the affected organs may be more extensively involved. In such examples the orifices of the ejaculatory ducts are often found enlarged and projecting into the urethra, as indicated by cautious sounding of that portion of the canal, as well as by hæmorrhage, and more or less disturbance of the urinary flow, especially enfeebling and reduction of the stream. The nitrate of silver, however, may generally be employed in these cases as the initial remedy, and continued until a sufficient trial of it has been made, when it can be laid aside, and the nitrate of copper substituted, in the event of its failure. The copper-salt causes more pain, and on that account the nitrate of silver should invariably be tried first. The watery solution is the form used by the writer in a very large majority of his cases, and he employs the two salts of equal strength, varying from four to twenty grains to the ounce of pure water.

It is best to begin with the weakest solution, and if found inefficient after one or two trials, to employ the stronger. The applications may be repeated once in five, six or eight days, until the symptoms ameliorate, as manifested by general improved feeling, which patients themselves never fail to report, and which the medical attendant hardly ever fails to recognize from visit to visit. As the improvement advances, the intervals of using the injections may be lengthened, until, finally, they can be discontinued. It will not be necessary to use more than one or two drachms of the solution for an injection, and from two to three minutes will be long enough to retain each one. The urine should be retained in every case before the fluid is applied the first time, unless there are good reasons for believing that the mucous lining of the bladder is decidedly implicated; and in slight cases it would be safest to do so throughout the treatment. When the vesical mucous membrane is affected the bladder must always be evacuated before using the remedy, as its entrance into that organ, and action upon the diseased mucous lining, are necessary parts of the treatment. Indeed, if there is decided irritability of the mucous coat of the bladder, it will be proper to inject that organ directly, and for the purpose three or four ounces of the weaker solution may be introduced and retained from two to eight minutes, and before the fluid is introduced the vesical cavity must be washed out with tepid or cool water. This is a painful operation, but in a few hours the pain abates, and then only recurs during micturition for one or two days. It is often followed by hæmorrhage from the bladder, which generally abates in a day or two. The injections of the prostatic urethra likewise often give rise to bleeding, which ceases after two or more days.

After two or three injections, in most cases, very marked general improvement can be perceived; the patient becoming more cheerful, is less averse to company; enjoys society, as well as his meals; if the locomotive organs have suffered pain or incoördination, they are more or less relieved; the vetiginous sensations have diminished; there is improvement in the feelings as well as in the exercises of the genito-seminal organs; and the patient sometimes represents himself as a newly-formed being. Cases frequently occur, however, in which relief is more tardy, and in some instances months will be required before decided amelioration takes place. In these examples it will not only be necessary to repeat the injections frequently, both to the seminal orifices and vesical cavity, but to employ also constitutional measures. It is often the case that the primary irritation is kept up by an oxaluric condition of the urine, to correct which the nitro-muriatic acid mixture is particularly adapted. Excessive nervous sensibility, or pain in the region of the genital organs, if found to disquiet much, will require narcotics, especially of nights, and small laudanum enemas or suppositories should then be used. Pain, or a disagreeable feeling of weakness, or immobility of the loins, will require counter-irritation over that region from time to time; and sinapisms, Granville's lotion, or dry cupping, can be employed for the purpose. In some cases repeated vesical injections of the strong solution of caustic will effectually relieve the dorsal pain after resisting the free use of narcotics. A soluble state of the bowels throughout the treatment should be maintained.

Examples occasionally occur, attended with undue nervousness, in some instances simulating insanity, and greatly disquieting patients and friends. In such cases internal narcotics will be allowable, but their tendency to disturb secretion renders them somewhat objectionable. Bromide of potassium, taken in cold infusion of wild-cherry bark, already referred to, in doses of from five to twenty grains, is better suited to these examples than narcotics, especially with females. Three or four doses during the day generally compose patients, and without the slightest disturbance of the secretory exercises.

When locomotor ataxia exists, even when of some standing, the treatment which has been briefly considered, in a majority of cases, will be equally applicable. In some exceedingly interesting examples of this complication the writer has employed it with most gratifying results. One of them was attended with complete incoördination of muscular action of both inferior extremities, with very considerable ataxia of the motive powers of the upper also, and incontinence of urine. In this case, too, the nervous erethism was so intense as to simulate insanity so closely as to induce the court of the county in which the patient resided to place his property in the care of guardians. Several others of the same description, but less strongly marked, were relieved, and locomotion more or less completely restored. In one of the cases last referred to, pain of the right hip and groin had existed nearly an entire year, attended with immobility, or rather ataxia of musculation, in which the most active medication for neuralgia and rheumatism had been employed, without the slightest relief, before coming into the hands of the writer. This interesting case was diagnosed genito-seminal neuropathia by him before asking a question, the diagnosis being deduced from the well-marked facies prostatica of the patient. A single application cured the disease promptly and permanently.

Cases of angina pectoris, palpitation, and vertigo, have been successfully treated by the writer in some instances by caustic urethral injections. In these cases there could not be a doubt that seminal neuropathia caused them, and it is not improbable that they are generally due to it.

With females, along with the treatment of the seminal neuropathia, measures will be demanded specially designed to medicate the existing complication. If ulceration of the os or cervix uteri be the complicating disease, cauterization with the nitrate of silver, or the acid nitrate of mercury will be required. When the former is employed it should invariably be used in the solid state; and the latter can be most conveniently as well as efficiently applied with a small mop or brush. In either case weak salt water should be freely injected over the cauterized parts as soon as possible after the remedy is applied, to guard against accidental lesion of the contiguous surface, and these operations may be repeated once in five, six, to twelve days, until the ulcers heal.

This complication is peculiarly liable to coexist with an irritable state of the bladder, and the writer inclines to believe the bladder affection is generally, if not always, the precursor; and to render the treatment effective, vesical injections will also be demanded. These two operations afford most benefit when they are used on alternate days; yet, to hasten the treatment, the writer has often employed them at the same sitting, and without causing undue suffering. The irritation in seminal neuropathia of females seems to begin in the meatus urinarius, from which points it extends backwards along the urethra, and finally over the mucous coat of the bladder. In numerous cases the writer thinks he has relieved the neuropathia by simply cauterizing the urethra when ulceration did not exist, and such cauterization invariably facilitated the healing of the ulcer of the uterus when present. So often was it the case that the writer—when much obscurity existed as to the causation of these ulcers with unmarried females—was disposed to refer them to the urethral erethism. It may be remarked that these conditions of the urethra and uterus, occasionally, are attended with locomotor ataxia, chiefly of the lower extremities, with unmarried females, not unlike the incoördinate movements of chorea, which promptly ameliorated under the caustic treatment. One of these cases experienced some irregularity of musculation of the superior extremities also, as well as slight alienation of mind manifested by a disposition to soliloquize and to move the lips as if talking: the subject was a young unmarried female, of highly cultivated mind.

Impairment of sight and hearing occasionally accompanies this complication, and in one instance the deterioration of vision amounted to almost total blindness, which had continued some months before the patient, a married lady, consulted the writer. In this case a morbidly sensitive urethra coëxisted with the ulceration of the os and cervix uteri, as well as general nervous disorder, and extreme depression of spirits bordering on melancholy. The general health had suffered greatly, and altogether the condition of the lady was most unpromising; yet it ameliorated unexpectedly, but promptly and completely, under the treatment by cauterization of the urethra and cervix uteri. In two weeks the sight was perfectly restored, and in six the lady returned home so far recovered as to require nothing but time and proper nourishment to perfect the cure.

In a very great number of cases of similar character, but of variable intensity, a like treatment was employed, with unvarying success, seeming to justify the propriety of the curative measures adopted, if not to verify the correctness of the diagnoses. It was never found necessary to address remedies directly to the complications involving the functions of sight and hearing. In some cases, when such complications are attended with intense pain of the loins, spinal irritation, by dry cupping, friction, or by the use of rubefacients of irritating qualities, may be resorted to with advantage. Counter-irritation may also be usefully employed when ataxia of musculation exists, especially dry cupping, over the entire spine, whenever both the lower and upper extremities are implicated.

Remarks.—Genito-seminal neuropathia, as the writer would denominate the disease termed progressive locomotor ataxia, is quite a manageable malady, especially in its earlier stages, according to his experience. Even after very considerable incoördination of functional movement has followed, both muscular and nervous, relief more or less complete can be secured by treatment. During the last twenty-five years the writer has treated numerous cases of this disease, and he has yet to meet with the first patient not greatly benefited or cured. Medicines, however, of themselves will not effect cures, or in a general way afford much relief. The various nostrums which have been published throughout the world as remedies for seminal weakness, were designed to combat this affection without a knowledge of its true naturé, and they have been as inefficient as diversified in character.

Lallemand, of France, was the first to employ the true and only reliable method of treating the disease, regarded by him as spermatorrhœa, but it does not appear that he considered it as tending to, or even liable to superinduce locomotor ataxia; and although he seems to have attached great importance to his plan of topical treatment, it must have been very inefficiently employed by him, and the curative results by no means satisfactory.

There can be little doubt that irritation of the orifices of the ejaculatory ducts, and perhaps of those ducts themselves, as well as of the seminal vesicles, is the true morbid condition upon which spermatorrhœa depends with males; and it is equally probable that the irritation is chiefly exaltation of sentient impressibility, with more or less enfeebling of the organic tone of the implicated structures. The innervation is often painful—in some instances exquisitely so—and invariably more or less ataxic; yet it is essentially neurotic and devoid of inflammation, seeming to be a form of neuralgia.

Now and then the erethism of the seminal orifices is connected with sympathetic disturbances in remote parts, of painful character, an example of which was referred to in this paper, and which was relieved by a single cauterization. In this case there was immobility from pain, but no incoördination of the powers of muscular motion from ataxia. It is difficult to account for the great diversity of locomotor disturbance in these cases, some being attended with acute pain as well as immobility, while others experience very little if any, and every grade of incoördinate musculation, in some instances amounting to a paralytiform condition bordering upon complete paralysis. The same diversity obtains in the other sympathetic disturbances, especially in the visual exercises, and hearing, as well as in the impairment of the memory, and in the exercises of the mind generally. For a number of years the writer has believed that a large proportion of the cases of insanity as well as of suicide was due to genito-seminal neuropathia. Indeed, he has seen cases of insanity in which the relations of cause and effect existed, in which sanity was restored by the caustic treatment.

With females the sympathetic disturbances of musculation are confined chiefly to the loins, hips and groins, the superior as well as the lower extremities being rarely affected in any marked degree, while vision, hearing, and the spirits, together with the memory, often suffer. They frequently suffer from insanity, and doubtless many of them are driven to suicide by the melancholy often accompanying this disease. In an interesting case of this cruel affection, treated by the writer, ulceration of the os and cervix uteri, and mental derangement, coëxisted with the seminal neuropathia. The alienation of mind amounted to furious mania, and had existed for many weeks. This case yielded speedily and perfectly to the caustic treatment used to the uterus and vesico-urethral mucous membrane.

The writer believes that females are fully as often affected with the disease as males, especially those who have indulged too freely in sexual intercourse or masturbation; with such, ulceration of the os and cervix uteri, as well as vesico-urethral irritation and nymphomania, often coëxist.

In many of the cases treated by the writer, more especially with males, but occasionally with females also, a remarkable thrilling, burning sensation was felt in the bottoms of the feet and in the toes when the caustic injections were applied to the urethra and bladder. Occasionally similar sensations were experienced by females when the os and cervix uteri were cauterized. Like sensations were now and then felt in the fingers; and in both cases when the muscular movements had become more or less ataxic and incoördinate.

In conclusion, the writer will state that he suspects the interesting case referred to by Dr. L. C. Butler in the number of the Boston Medical and Surgical Journal for December 24, 1868, page 324, as well as those cited by S. G. Webber, M.D., in the same Journal for January 7, 1869, page 354, were examples of genito-seminal neuropathia.

Prince Edward C. H., Virginia.

Reports of Medical Societies.

MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY.

CHARLES F. VAUGHAN, M.D., SECRETARY.

THE annual meeting was held at Waltham, April 20th, the Vice President, Dr. Holmes, in the chair.

After the usual regular business, Dr. Walcott alluded to the order adopted by the Councillors of the Massachusetts Medical Society in 1837, viz., that any one practising medicine a year without applying for admission to the Society, shall be regarded as an irregular practitioner. He inquired if this order was regarded in consulting. Some discussion ensued. A case was mentioned of a partnership now existing between a member of the Society and such a practitioner. It was decided that such cases should be brought to the notice of the Supervisors.

A communication was read from the Middlesex North District Medical Society, endorsing the action of the Middlesex South in fixing $25 and $50 as the proper fees for coroners' autopsies.

Dr. Wellington was chosen to fill the vacancy in the committee upon this matter, caused by the death of Dr. Anson Hooker.

On motion of Dr. Hoyt, a committee of three was appointed to prepare resolutions commemorative of the death of Dr. Hooker.

An animated discussion occurred upon the admission of physicians to the Massachusetts Medical Society who are graduates of schools in other States. Finally, the following resolution, introduced by Dr. Nichols, was adopted, viz. :—

Resolved, That in the opinion of the members of the Middlesex South District Medical Society, all persons, wherever graduated, presenting themselves as candidates for admission to the Massachusetts Medical Society, should undergo a satisfactory examination before the Censors of the district in which they reside; and that our Councillors be instructed to use their influence to bring about a change to this effect in the laws of the Massachusetts Medical Society.

The orator, Dr. Walcott, read an interesting paper upon the hydrate of chloral, embracing a *resumé* of its history, chemical composition and physiological action, illustrated by cases and the results of experiments upon animals. He concluded that much of the uncertainty in its action, and the difference of opinion as to its safety, is due to the inequality of the specimens and the difficulty and expense of obtaining a pure article.

Dr. Sullivan, of Malden, read a paper upon the use of atropia in whooping cough. He uses a solution containing one grain to the ounce of water; the initial dose for a child being from one to three drops. The dose is gradually increased to twenty drops, if necessary, once daily. The subject was illustrated by cases. In one case the progress of the disease was illustrated by a strip of paper bearing the mother's record of the paroxysms, in holes pricked with a pin, after Trousseau's plan.

Dr. Hunt reported a case of diabetes and one of Bright's disease, with specimens of urine from each, before and after the addition of reagents.

Dr. Lincoln reported the results of autopsies in two cases of sudden death. The first, a laborer of fine physical development and in apparent good health, had complained only of a tired feeling at times. While going to his work, he stumbled and fell, but recovered himself, falling twice again in the same way. Died in ten minutes from the first attack. On examination, the cerebrum was apparently healthy, but there was general softening of the brain substance of the cerebellum.

The second case was that of a woman generally strong and healthy. She had complained for nearly a week of fatigue, slight headache and earache, with constipation. The tongue was furred, and she had vomited several times. Thought she had "taken cold." She worked until three days before death. Three hours before death a convulsion occurred suddenly, lasting half an hour or more. Did not recover her consciousness. Examination showed pretty general softening of the substance of the cerebrum and cerebellum, most marked on the left side, with general anæmic appearance of brain. At the base of the cerebellum, on the right side, there was about a drachm of fœtid pus.

The Censors reported the admission of Drs. Reuben Willis and Horace Eugene Marion.

The Society adjourned at a quarter past two.

Medical and Surgical Journal.

Boston: Thursday, May 5, 1870.

NOTES AND EXTRACTS FROM THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

Transitory Mania.—The discussions on this subject which have appeared in this Journal have called for a review signed with the initials I. R. If anything were needed to show the importance of this subject, the want is supplied by the intervention in the controversy of the distinguished pen of Dr. Isaac Ray.

Somewhat more than a year ago we put the question—can a man be admitted to be insane, for a few minutes, just long enough to commit a crime, though always perfectly sane before and after the act? In a note accompanying the article of which this question is a part, Dr. Jarvis, on the basis of "the doctrines given by Marc, Esquirol, Castelnau, Duvergie, Maudsley, and also by Woodward and Bell, and admitted by Ray," seems to infer an affirmative answer.

In an article published in our issues of June 10th and 17th, 1869, Dr. Jarvis goes more fully into the subject, amplifying the quotations just referred to. The same writer, at a later date, applies the maxims he advocates to the case of Samuel T. Andrews, tried for the murder of Cornelius Holmes, in a paper communicated to this Journal, and furnished in advance to the printers of the Report of Andrews's Trial. A reviewer in the Boston Medical and Surgical Journal takes exception to the position of Dr. Jarvis. At this point the writer, I. R., in the *American Journal of the Medical Sciences* interposes, defends Dr. Jarvis, and is quite severe upon the opponent of the latter—viz., "N. F." It strikes us, however, that his remarks are merely of the nature of an *argumentum ad hominem*. For instance, he quotes the words of N. F., "we must guard against the danger, great at the present day, of letting a high sounding foreign name go far as authority with us," and then replies as follows:—

"This is Native Americanism with a vengeance. We rubbed our eyes, wiped our spectacles, and read the passage a second time, before we were quite sure that we read it correctly, and then we wondered by what curious dispensation it had happened, that the writer, who would have been a brilliant light among the Know-nothings, should have been born so far out of due time. His life must be a wretched one in these degenerate days. We suppose that on the occasion of the Humboldt centennial celebration, a few months since, when the people of Massachusetts—high and low, learned and unlearned, gentle and simple—were listening to that noble panegyric upon the great philosopher, from the lips of him of all others most worthy to receive his mantle, he retired to his room, and, like Jacob of old, rent his clothes, put sackcloth upon his loins, and mourned over the distinguished honors thus showered upon a couple of foreigners. Within our knowledge, such intense nativism has never been paralleled but once. An American youth of Irish parentage was once complaining bitterly of being flogged by his father. Not that it hurt him much, but it was the idea of "being licked by a d—d foreigner."

In our issue for December 30th, 1869, however, there was a communication by still another disputant, entitled "The Novel Defence attempted at the Trial of Samuel M. Andrews for Murder." As no reference is made in the review under consideration to that article, we presume that I. R. had prepared his paper for the *American Journal of the Medical Sciences* before the close of the last year. We quote therefore the following passage from the communication entitled "A Novel Defence," &c.:—

"The cases quoted to sustain the theory [of Dr. Jarvis] are cases of the past. They have been handed down from one author to another rather as the curiosities of disease than as types to be looked for and expected. Many of them were collected and first reported by an enthusiastic Frenchman, who, with many excellencies, was always ready to make a striking impression. All are most briefly reported. Some of them were evidently cases of continuous insanity and not instantaneous. In others there seems to be no proof that any insanity existed. Of the whole class it may safely be said, as has been well remarked by Bucknill, the best English authority on criminal insanity, that the evidence upon which they rest is unsatisfactory. With the enormously increased facilities for observation afforded by the hospital system of the present day, if such a form of disease really existed, the reported cases ought to have multiplied a hundred fold. Why is it that we are told to fall back upon the observations of Esquirol and Marc and Castelman? With lunatic hospitals scattered at short distances over our land, each having a medical staff on the alert to make discoveries in their specialty, and all consulted upon most of the peculiar cases arising within the circle of their duty, why is this form alone unreported and unheard of? Why are they unreported anywhere except in defence of crime?"

Since this statement (by an expert) has never been replied to, our question—can a man be admitted to be insane for a few minutes, just long enough to commit a crime, though always perfectly sane before and after the act?—has never been settled by those to whom we look for instruction in the matter.

The latter and larger portion of I. R.'s article in Hays's Journal is occupied with a counterblast at lawyers and others, for their complaints of the conflicting opinions of experts as given on the witness stand. He well says—

> "That discovery, improvement, progress, which are the true glory of physical science, are fatal to unanimity of opinion. Men look at the same thing from different points of view, under different lights; in short, with every variety of preparation, and thus it is that the same facts often present a very different signification to different men, though pursuing a common study. The conclusions of physical science do not follow one another like the successive steps of a mathematical demonstration, simply because they constitute a very different class of truths. Are we to believe that geology is but a tissue of idle fables, because on some important points scarcely two geologists agree? Are we to pronounce the astronomical researches of Kepler and Tycho Brahé to be utterly barren, because they differed respecting the Copernican system? Are the labors of naturalists no better than child's play, because of the world-wide difference between Mr. Agassiz and Dr. Darwin, touching the origin of species? Even in pure mathematics we fail to find this new judicial test of fitness for the witness stand. In the course of a discussion on Quaternions, a few months since, in the National Academy of Sciences, did we not hear Professor Alexander dissenting most emphatically from the general conclusions of Professor Pierce? In fact, the most practical men, those who never venture a hair's breadth from the line of their own experience, are apt to differ as widely as others, when they undertake to generalize their knowledge. Who ever knew of a jury of sea-faring men appointed to examine and report on the seaworthiness of a vessel, to reach a unanimous conclusion? And yet such a result is regarded as a proof, not so much of ignorance as of wide experience joined to rational caution, by those who would heap indignities on medical men who should, conscientiously and intelligently, differ as to the mental soundness of a given individual.
>
> "Such an estimate of the value of medical evidence given by experts comes with an ill grace from lawyers, with their proverbial experience of the uncertainty of their science, in spite of its accumulations of wisdom, of the severity of its logic, and the sagacity of its practitioners."

We may add that when the long-established maxim that twice two must always make four, and that it is in the nature of things impossible that in any sphere of existence twice two should make five, is called in question; a mathematical professor of the highest eminence declaring it to be to him conceivable that the Almighty could so arrange things that twice two should make five; under these circumstances, we need not be so much mortified as we are expected to be at the question, "who shall decide when doctors disagree?"

We must confess, however, that we are not quite so easy in mind at the present position of experts as to cases of alleged homicidal insanity. It is to be lamented that when the law has asked them for light they have so often given only the clouds of reciprocal contradiction, and that, too, upon points which we outsiders would almost suppose they should be as well agreed about as two skilled auscultators would be relatively to the existence in a patient of pulmonary consumption. In regard to the facts—*i.e.*, the rational symptoms and physical signs—these latter would be likely to concur; and if not in accord as to the influences, they would probably agree that there was room for doubt.

With these radical and widely-published differences of opinion among those who have been put in the position of experts in insanity, it is hardly perhaps to be wondered at that the uninitiated should lend an ear to the stories (groundless we have always maintained them to be, on account of the really expert attainments of those in charge of our public lunatic establishments) of false sequestration in madhouses. It has latterly too often happened that when a man has been put upon trial for criminal homicide, his counsel have produced expert testimony that he was insane, which was rebutted by the positive statement of another expert that he was sane. And, yet, it has not been the ordinary case of an ignoramus, or a half-educated doctor dressed up as an expert, merely because he held opinions suited to the purposes of counsel. But, the scientific witnesses on both sides have been men of learning, if not of practical experience.

By way of remedy for this state of things we have only to repeat the call now reiterated from many sides that expert witnesses be appointed by judicial authority. In that case we submit, His Honor, in making his selection, would be less likely, in seeking to enlighten himself and the jury as to the sanity of the prisoner, to inquire how many books on insanity the so-called "alienist" had read, or yet how many thousand patients he had seen collected in the hospitals he had *visited*. The test questions would more likely be how much experience he might have had in the practical diagnosis of mental disorder; and how great were his familiarity with the various phases of lunacy as presented by patients for a long time under his daily supervision.

As to the Andrews case we will make this statement, although it does not affect the general principles laid down by Dr. Jarvis, or the others above referred to. In addition to Dr. Choate, then of the Taunton Lunatic Asylum, who testified to the sanity of the prisoner, Andrews was visited after his arrest, and at the instance of the counsel for the defence, by another eminent superintendent of a lunatic hospital. The latter gentleman very naturally was not called into court to give his opinion, simply because that opinion was that though Andrews by the laws of heredity *ought* to have been insane, he in point of fact was not so.

Dr. S. Weir Mitchell thus opens a paper in the *American Journal of the Medical Sciences*, entitled "Observations on Poisoning with Rattlesnake venom."

"I have been able during the past summer to make observations upon certain points connected with snake poisons, which serve to complete portions of my former studies. I have also afforded to Dr. Richardson an opportunity of studying with higher powers than those formerly used by me, the blood of animals which were sick or dead from snake venom. His observations prove to my entire satisfaction the correctness of the belief I have already published as to the peculiar corpuscles described by Dr. Halford. Although I had long since criticized this gentleman's views, and pointed out that what he saw were probably leucocytes, no one as yet has shown how it is that these come to assume the appearances described by Halford. Thus far all observers have failed to see the corpuscles of Halford, and in a letter to me this gentleman intimates his own doubts as to their being new formations. Apart from this matter, Dr. Richardson's notes are of value as confirming many of my former conclusions as to the blood."

This is Dr. Richardson's summary:—

"Proceeding now to group together the results of these experiments, it will be seen that in the example of a rabbit, dog, and goat, so poisoned by rattlesnake venom as to survive its insertion from one to six hours only, whose hearts were allowed to remain unopened from twelve to twenty-four hours after death, the temperature varying from 75° to 90° Fahr., the blood when removed from the cardiac cavities in such a way as to avoid all contamination, and carefully examined with a high power, exhibited cells corresponding perfectly to those described by Prof. Halford; yet that these so-called 'peculiar cells' were always mingled not only with white blood corpuscles in their ordinary 'pearly and opaque' condition, but also with those in various stages of enlargement and alteration, such as may be at any time produced in the white globules of normal blood simply by diluting the liquor sanguinis with water; and further, that in the case of the goat, when a majority of the 'peculiar cells' presented the usual character of being multinucleated, the white blood globules, if distended by water, exhibited the same peculiarity. We may, therefore, I think, fairly conclude that the abnormal corpuscles in these particular instances were in reality only white blood globules which had undergone an alteration similar to that caused by reducing the specific gravity of the blood, and so establish a strong presumption (whose correctness Prof. Halford can alone decide) that the 'peculiar cells' described by him as resulting from the poison of snake bites are precisely analogous in their character.

"In regard to the 'thinning' of the blood, I hope to have an opportunity of deciding as to its amount at some future time, by taking the sp. gr. of that fluid at intervals after death by means of a hydrometer. To do this, however, one of the larger animals, as a horse, for example, will be required."

Dr. DaCosta thus concludes his Clinical Notes on Chloral, in the *American Journal of the Medical Sciences.*

"I may record my belief, drawn from studying the action of chloral, that it is an important addition to our therapeutic means—chiefly, however, as a hypnotic. Its action as a destroyer of pain is limited; nor do I think that it can compete with ether or chloroform to produce the insensibility requisite for surgical operations. Its chief value seems to be that of an auxiliary to opium, or to take its place when opium is not admissible. It is, however, not so certain; nor is it ever likely to displace that peerless drug, of which Sydenham declares that without it Medicine would be as a cripple."

Dr. H. C. Wood, Jr., has succeeded in inducing profound anæsthesia in a cat by the vapor of cold alcohol.

Taunton Lunatic Hospital.—The resignation of Dr. George C. S. Choate, the able Superintendent of this institution, to which we referred in the Journal of March 3d, took effect on Saturday, April 30th, and his successor, Dr. William W. Godding, has entered upon the duties of the office.

Dr. Godding is a Massachusetts man, a son of the highly respected Dr. Godding, of Winchendon, Mass. He has had ten years experience in the treatment of the insane, having been for three years first assistant in the Hospital at Concord, N. H., and for the last seven years in the Government Hospital for the Insane at Washington, D. C., where he has been first assistant under Dr. Nichols.

Dr. Godding comes thither with the very highest testimonials to his character and ability from Dr. Nichols and the Trustees of the Washington Hospital, from Miss Dix the well-known philanthropist, and from many others who have had opportunities of judging of his rare qualifications for the office. He has been appointed after careful investigation, and with entire unanimity, by the Trustees of the Taunton Hospital, and there is every reason to believe that his success will fully justify the wisdom of their choice.

Knowledge for the People.—(From *Harper's New Monthly Magazine* for March, 1870, page 507.)

"It" (the human blood) "completes the entire circuit from the heart to the extremities, from the extremities to the heart again, about *twice every second.* While the reader has been perusing this paragraph this ceaseless tide has completed, probably, at least one hundred and twenty of these circuits."

Is that so, Mr. Editor? Subscriber.

Dalton says, in his Physiology, that if a certain experiment "were altogether decisive it would demonstrate that the blood performs the entire round of the circulation in from 20 to 25 seconds. But it is not so conclusive in this respect as might be supposed. * * * The truth is, however, that we cannot fix upon any uniform rate which shall express exactly the time required by the entire blood to pass the round of the whole vascular system, and return to a given point."

What does it mean—the paragraph quoted as follows?—

"*Exposure of Women in Classes.*—The New York *Medical Gazette* strongly disapproves of the practice, apparently a common one in American medical schools, of exposing women before a large class for the purpose of instruction. We quite agree that much more would be learned by small classes frequently held, and the patient would suffer less."—*British Medical Journal*, April 16, p. 402.

Middlesex North District Medical Society.—At the annual meeting of this Society, held in Lowell, April 27th, 1870, the following officers were re-elected for the year ending April 26th, 1871 :—

Joel Spaulding, of Lowell, *President;* Levi Howard, of Chelmsford, *Vice-President;* John H. Gilman, of Lowell, *Secretary;* N. B. Edwards, of North Chelmsford, *Treasurer;* Franklin Nickerson, Lowell, *Curator and Librarian;* John O. Green, of Lowell, *Commissioner of Trials. Standing Committee*—George E. Pinkham, of Lowell, Charles Dutton, of Tyngsborough, Moses G. Parker, of Lowell. *Councillors*—Chas. A. Savory, of Lowell, John C. Bartlett, of Chelmsford, Walter Burnham, of Lowell, Joel Spaulding, of Lowell, Nathan Allen, of Lowell, Francis E. Plunkett, of Lowell. *Censors*—Nathan Allen, of Lowell, Hanover Dickey, of Lowell, Charles A. Savory, of Lowell, Daniel P. Gage, of Lowell, N. B. Edwards, of N. Chelmsford.

The Late Fatal Mistake at Charlestown.—The result of the inquest in the recent child-poisoning case, is the following verdict :—

That the child, Frederick W. Libby, came to his death on Saturday, the 23d of April, at 9¼ o'clock, P.M., by means of an overdose of opium, administered by its grandmother, through the advice of Charles O. Wilson, an apothecary clerk. And the jurors further say that the said Wilson is guilty of gross ignorance in advising such a remedy, and that Dr. Wm. L. Bond, the druggist, from whom the opium was obtained, is culpable in allowing a poison to be taken from his store without a proper label, and without inquiring as to its use.

Cerebro-spinal Meningitis.—We receive accounts from various parts of the country, from central Mississippi: from Quincy, Florida; from Erie County, Pennsylvania; from Central South Carolina, and from Southern Georgia, that limited but malignant epidemics of cerebro-spinal meningitis are prevailing. The Erie *Dispatch* says :—

"The singular fatality that has attended this dread malady has thrown the community into a state of abject terror, and many are flying from the place to escape from it. The skill of the local physicians has been baffled by it, and the best medical aid of this city has been peremptorily summoned. From the experience of some of our physicians in meeting this malignant disorder in their army practice, we anticipate that a check will be put upon it."

Our own hopes are less sanguine; army experience did not teach any especially successful treatment for cerebro-spinal meningitis.—*Med. and Surg. Reporter.*

The Bill which the House Committee of Naval Affairs has agreed to report, differs from the one reported and tabled in the House of Representatives a year ago, chiefly in casting more shadow from less substance. From 1854 to 1862, rank in the medical staff came within one grade of that of the line; the highest line rank being captain, while surgeons of more than twelve years held the relative rank of commander. The present proposition is to make the highest medical rank five grades inferior to that of the line, and to place the surgeon *seventh* in the descending scale. And this in face of the fact that in the navies of civilized Europe, where class distinctions are more jealously guarded than here, medical officers attain the second, or at lowest, the third positions on the list, ranking as vice-admiral, or rear admiral. We hope that the proposed bill may not pass without material amendment in this respect.—*New York Medical Gazette.*

Inodorous Sulphide of Carbon.—M. Cloez purifies bisulphide of carbon by leaving it twenty-four hours in contact with powdered corrosive sublimate. The mixture requires agitation. It is then carefully decanted and distilled from a little inodorous fat with the aid of a water bath. The sulphide, when purified in this manner, has an ethereal odor, and is suitable for the extraction of odorous oils, &c.—*Medical Press and Circular.*

LOSS OF SPEECH AFTER CHLOROFORM.

A servant girl, says the *Alg. Med. Centr. Zeit.*, for the sake of the extraction of a tooth, inhaled chloroform for a very short time. On awaking, she had lost the power of speech, could not utter any sound whatever, and remained in that state for five weeks, in spite of various remedies, especially electricity. After this time she began to speak in a low tone, and was put under appropriate treatment. It is supposed she suffered during anæsthesia from rupture of some cerebral vessel. She had never been hysterical.—*Lancet,* April 16.

Medical Miscellany.

We expect to have next week a full account of the doings at the present session of the American Medical Association at Washington. We go to press with this week's Journal to-day—Wednesday. Meantime the following items have come to hand:—

The National Convention of Medical Colleges.—The National Convention of Medical Colleges held to-day [Tuesday] resolved that a committee of nine be appointed to ascertain how many regular medical colleges are willing to become members of the Association of Medical Colleges. Each college so consenting shall elect one or more delegates, authorized to pledge their respective faculties to whatever plans of improvement in medical education may be adopted by the convention. These delegates are recommended to organize themselves into a permanent organization, with a view to coöperate with the American Medical Association. The chair appointed the following as a committee:—Professors S. N. Davis of Illinois, Samuel Logan of New Orleans, A. Hammer of St. Louis, T. Parvin of Louisville, S. D. Gross of Philadelphia, G. C. Blackman of Cincinnati, G. C. Shattuck of Boston, A. C. Pall of New York. The convention then adjourned *sine die*.

The American Medical Association.—*Washington, May* 3.—Four hundred delegates were present at a meeting of the American Medical Association to-day. There were conflicting reports on the admission of delegates from medical societies and institutions in the District of Columbia which recognize colored physicians. They were referred without instructions to the committee on ethics. Further contested cases having been presented, a new committee on ethics, consisting of Doctors Alfred Stillé of Pennsylvania, N. S. Davis of Illinois, J. N. Kellers of Kentucky, and H. F. Askew of Delaware, was appointed to consider and dispose of the entire class of subjects. The annual address was delivered by Dr. George Mendenhall of Cincinnati, and the proceedings were suspended until the committee on nominations report. The delegates called on the President this evening, and were received by him in the East Room, assisted by Mrs. Grant.—*Telegram to the Associated Press.*

The Troubles among the Doctors.—There was something of a crowd present this morning, when the meeting of the American Medical Association opened, because everybody interested thought there might be a muss over the question of giving the negro doctor his rights. The committee on credentials submitted majority and minority reports, the former excluding delegates from societies that admit colored physicians to consultation. There was much excitement on the reading of the reports, and if general discussion had been allowed, the thing promised to be very lively. Dr. Davis of Chicago adroitly staved it off by moving to send the whole subject to another committee, which may or may not report to-morrow. The question of color is mixed up with half a dozen other quarrels among the medical men in this district, and it will be a hard matter to get at a square vote on that distinct issue.—*Special Despatch to the Boston Daily Advertiser.*

Erratum.—On page 322 of our last issue, instead of "a diploma," read *diplomas*.

To Correspondents.—Communications accepted:—Billroth's Death from Chloroform—What are the Advantages of Joining the Massachusetts Medical Society?—Normal Position of the Uterus—New Stethoscopic Notes—Differential Indications * * * * [illegible]—Review of Bonnafont—Review of Gouge on Ventilation.

Pamphlets Received.—The $100 Prize Essay on the Potato and its Cultivation. Prize offered by W. T. Wylie, and awarded to D. H. Compton. Published by Orange Judd & Co., New York. Pp. 30.—Iodoform: its Therapeutic Effects. By [illegible] Kennedy, M.D., Newark, Delaware. Pp. 16.—The Transactions of the Medical Association of the State of Missouri from its Reorganization, Dec. 10, 1867, to the Annual Meeting, April 27, 1869, inclusive.—Annual Report of the City Physician and Superintendent of Burials, for the year 1869. Lowell, Mass. Pp. 8.

Married.—At Guilford, Vt., 27th ult., George F. Bigelow, M.D., of Boston, to Miss R. Gertrude Houghton.—In this city, 3d inst., Joseph Garland, M.D., of Gloucester, to Miss Susan D. Knowlton, of Boston.—In this city, 28th ult., Dr. Wallace Seeley, of Cincinnati, to Miss Helen, daughter of Michael H. Simpson.

Died.—At Philadelphia, 1st inst., of consumption, Dr. Joseph N. Willard, late Surgeon of the 1st Massachusetts Heavy Artillery, 34.—At Salem, 28th ult., Dr. William Webb, 76.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending April 30, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases. Consumption.	Pneumonia.
Boston	116	26	12
Charlestown	16	4	1
Worcester	14	2	0
Lowell	19	2	1
Milford	5	1	2
Chelsea	4	3	1
Cambridge	12	1	0
Salem	6	1	1
Lawrence	6	0	1
Springfield	3	1	0
Lynn	9	0	0
Fitchburg	4	2	0
Newburyport	5	2	0
Somerville	3	1	1
Fall River	8	1	2
Haverhill	4	3	0
	234	50	22

Worcester reports one, and Boston two deaths from smallpox. From all the above places there are reported four deaths from croup, three from typhoid fever, two from whooping cough, two from measles, two from diphtheria and one from scarlet fever.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending April 30th, 116. Males 62—Females 54.—Accident, 2—apoplexy, 1—congestion of the brain, 4—disease of the brain, 3—inflammation of the brain, 1—bronchitis, 2—cancer, 1—canker, 1—cerebro-spinal meningitis, 1—cholera infantum, 1—consumption, 26—convulsions, 1—croup, 3—cystitis, 1—debility, 3—diarrhœa, 1—diphtheria, 1—dropsy, 2—dropsy of the brain, 5—hæmorrhage, 3—disease of the heart, 7—intemperance, 1—insanity, 1—jaundice, 1—disease of the kidneys, 3—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 11—marasmus, 2—old age, 2—peritonitis, 2—pelvic cellulitis, 1—premature birth, 3—puerperal disease, 1—scalded, 1—smallpox, 2—disease of the skin, 1—suicide, 1—unknown, 7.

Under 5 years of age, 41—between 5 and 20 years, 13—between 20 and 40 years, 32—between 40 and 60 years, 16—above 60 years, 14. Born in the United States, 77—Ireland, 26—other places, 13.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

SOME OBSERVATIONS ON THE CLIMATE AND MEDICAL RESOURCES OF MADEIRA.

By Francis H. Brown, M.D., Boston.

The knowledge of a forthcoming work on the Island of Madeira, by Dr. Grabham, of Funchal, has prevented me, hitherto, from embodying in an article the results of observations made by me in 1868. The appearance of the book[*] this year enables me to give it a notice, and to incorporate with it such of my own observations as may be of interest to the profession, and for the good of their patients.

Dr. Grabham, a member of the Royal College of Physicians of London, driven from his home to a milder climate by the state of his own health, has been a careful and patient observer for a number of years, and, studying, as he has, under the most favorable circumstances and with the experience of former laborers in the same field, may be taken as an excellent authority not only on the climatology of Madeira, but of numerous other localities of the old world to which he refers. His book comes to us from the well-known firm of the Churchills, and is a valuable handbook for those seeking a retreat from the vicissitudes of severe climates.

It is singularly unfortunate that a place, presenting such manifest advantages to patients suffering from pulmonary and other diseases, should have been so little visited by Americans, and it would seem that only a want of knowledge of these advantages could lead to so marked a neglect. Unfortunately, the island is somewhat difficult of access to Americans. As we have hitherto had but little trade with Madeira, communication between the United States and the island has been limited to a chance vessel, or to a circuitous steamer passage by the way of England or France. Except, therefore, to a few Americans only, Madeira is a forbidden land.[*] To our own people Madeira is no less untried than unknown. Until the last year or two our libraries have hardly contained one of the numerous medical and scientific works[†] which have been written; for hardly any place, so limited in extent, has been so thoroughly worked up by medical men and naturalists, as the island in question. The climate, the meteorological conditions and their effects on invalids have been carefully studied by scientific persons, and the results obtained utilized for the good of the sufferer. In the matter of Natural History, every department has been fully investigated, and many large and exhaustive works have been written on the Fauna[‡] and Flora, and the volume of Dr. Grabham completes a series which, in fulness and accuracy, scarcely leaves anything to be desired for a full knowledge of the island.

Madeira is an island, of volcanic origin, situated between the parallels of 32°49′44″ and 32°37′18″ N. lat., and between 16°39′30″ and 17°16′38″ of long. W. from Greenwich. Its extreme length is thirty miles, and its greatest breadth twelve and a half miles. Its general shape is an irregular pentagon. Its area is, approximately, 240 square miles. The surface of the Island is extremely broken; at the centre it rises in mountains of from

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[*] Grabham: The Climate and Resources of Madeira: London. 1870.

[*] Eight steamers calling at Madeira, both in their outward and homeward passages, now leave England regularly every month, sailing from Liverpool, Southampton and other ports. The steamers are commodious, clean and generally satisfactory; the passage is accomplished in about six days, and tickets are issued at from £12 to £20. To a person accustomed to the sea by the passage to England, the farther experience of the voyage to Madeira can hardly be irksome. Invalids in the latter stages of consumption, to whom railway travelling has become difficult or impossible, are enabled to reach Madeira without undue exertion, and the vessels which now carry passengers are fully furnished for their especial wants. The direct passage, by sailing vessel, from America is about twenty-five days. No passports are necessary in coming to Madeira. The gold and silver coins of all countries are current on the Island. Letters and bills of credit can be drawn on merchants residing in Funchal.

[†] An excellent collection of medical, scientific and general works on Madeira may now be found at the Boston Public Library; a few also may be seen at the Boston Athenæum.

[‡] Brown: Some Observations on the Fauna of Madeira, with list of books appended. Proc. Boston Soc. Nat. Hist., vol. xii., 1868.

4000 to 6000 feet, and this elevated ridge extends, in almost unbroken continuity, and of an average height of 4000 feet, a large part of the length of the Island. From each coast ravines penetrate the Island to a great depth, separated from each other by spurs, which terminate on the coast in bold headlands, and these again, subdividing and running one into the other, give the whole Island a rugged aspect, a succession of hill and hollow, in endless iteration. The bold, rocky shores of the Island—presenting, as stated by many travellers, the finest coast scenery in the world—its rugged surface and wild ravines, appear like one mass of volcanic mountains, with here and there a space for the villages of the inhabitants.

The Island of Madeira contains something more than 100,000 inhabitants, and the city of Funchal about 30,000.

Madeira forms one of a group which includes properly Porto Santo and the Desertas—all of the same wild character. Madeira, however, is the only one which is resorted to by visitors. Its latitude places it nearly 10° north of the Tropic of Cancer, and a few degrees beyond the winter limits of the North East trades. It is about on the parallel of Charleston, S. C.; while it is nearly 320 miles distant from the coast of Africa, 260 north of Teneriffe, and nearly 300 south of the Western Islands. Moreover, it is in the track of those portions of the Gulf Stream which descend from the N. N.W. toward the African coast, and of that current which runs to the westward of Portugal and along the coast of Africa to the eastward of the Sargasso Sea. The perfect isolation of Madeira, its semi-tropical position and its relations to the Gulf Stream, give it, as a whole, a decided character of uniformity. In addition, the peaks of the Island collect around them a heavy veil of clouds, which shuts off the ardent rays of the sun during the day, while, at night, it prevents the radiation of heat from the earth's surface.

The characteristics of the climate of Madeira are a *mild, moist air, and a marked uniformity of temperature.* The Madeira group will be seen to occupy a space between the isothermals of 64° and 68°. Not to hinder one with long tables and figures, its mean annual temperature is 67°30′[*] at the sea level; that is 17° warmer than that of London, and about 9° warmer than that of Nice. Sir James Clark says:—"The mean annual temperature of Funchal, the capital of the Island, is 64°56′, being about 5° only above that of the Italian and Provençal climates. This very moderate temperature, relatively to its low latitude, arises, however, from the summer at Madeira being proportionally cool. For, whilst the *winter* is 20° warmer than at London, the *summer* is only 7° warmer; and whilst the winter is 12° warmer than in Italy and Provence, the summer is nearly 5° *cooler.*[*]" The mean annual range of temperature at Madeira is, as nearly as may be, 9°; the mean monthly progression and recession nearly 2°6′. Its mean temperature for the four seasons is for winter, 61°20′—spring, 65°39′—summer, 70°01′—autumn, 67°87′. The following table, giving the mean quarterly and annual temperature, of well-known resorts, is inserted for reference.

	Winter.	Spring.	Summer.	Autumn.	Mean.
Algiers[†]	55	66	77	60	64
Azores[‡]	57·83	61·17	68·33	62·33	62·40
Cairo[§]	58·52	73·58	85·10	71·48	72·17
London[‖]	39·12	48·76	62·32	51·35	50·39
Malta[¶]	57.33	63·50	78·16	71·00	67·50
Mentone[**]	49·5	60	73·5	55·6	59·5
Naples[††]	48·50	58·50	70·83	64·50	61·40
Pau[‡‡]	41·79	51·96	67·41	55·64	54·95

In Madeira, therefore, there is only a difference of 9° between summer and winter; whereas, in London, which may represent an English climate, there is a corresponding difference of 23°, and, at Mentone, of 24°. All the foregoing observations concerning Madeira agree substantially with the records of former times, and there is no evidence of any change having occurred, in the period during which observations have been taken. The winters of Madeira are, with rare exceptions, mild; its summers, especially in the higher parts of the Island, to which visitors generally go, are comparatively cool; more particularly to those visitors who seek the Island enfeebled by the debilitating malarial fevers of the African coasts. The description of Plutarch, in his Life of Sertorius, of the islands of this region—"the changes of the seasons are almost always gentle and the air is pure and wholesome"—shows that the half fabled, half real Insulæ Fortunatæ of the ancients possessed a mild climate in those days, as well as our own. Speaking of the Mediterranean, Bennett says:—"It is well to recollect that, in such a climate, in the warmer temperate zones, winter is, by no means, avoided. The descriptions of the winter climate of Nice, Cannes, Hyère and Italy in general, contained in most books of travel, works on climate and guide books, are mere poetical delusions. * * * * I believe that continuous warm weather in winter, and the complete absence of cold days or nights are not to be met with in the temperate regions; only in tropical regions; and those regions present many drawbacks both to health and comfort. If they are considered requisite, however, the tropics, or, at least, Madeira, should be selected, not the Mediterranean."* To show that the climate of Madeira is not strictly invariable, we may instance the fact that several unseasonable winters have been recorded.† Such exceptions, however, are rare, and do not invalidate the advantages of the Island in a sanitary point of view. In my quotations, as well as in the general tone of the article, it will be noticed I do not refer to the questions whether diseases are best treated by continuous warmth or cold; the true question seems to be, whether, unless a warm or moist air is decidedly contraindicated, it be not better to adopt the absolute uniformity of Madeira, than run the risk of changeable weather on the Mediterranean, in Florida or Minnesota. If it be decided, in any special case, that a bracing, stimulating climate is desirable, such an one cannot be found in Madeira.

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[*] Grabham. Op. cit.

[*] Clark: The Sanative Influence of Climate. London. 1841.

[†] Armand: Climat de l'Algerie.

[‡] Blunt.

[§] Humboldt, from Nouet.

[‖] Howard.

[¶] Army Medico-statistical Reports.

[**] Bennett.

[††] Broschi.

[‡‡] Christison.

"The mean annual standing of the barometer, corrected for altitude and temperature, is 30.14 inches, and the variations are very slight and infrequent."‡

The prevailing winds of Madeira are from the N.E.; they are said to blow during nine months of the year. During one year, Dr. Grabham gives 263 days of N.E.—8 of N.—7 of E.—and 62 of W. wind, in 340 observations. The winds from the N., E., and N.E., give the finest weather; those from the W. and S.W. occur at intervals during the winter months, and are the harbingers of the warm rains which occur at that season. In considering the character of Madeira, notice must be taken of the fact that its principal resort for invalids, the city of Funchal, is situated on the southern shore of the Island, completely closed in by high mountains from the direct action of the northerly winds, and only exposed to direct and violent winds at occasional intervals, during certain seasons of the year.

At infrequent intervals during the year Madeira is visited by hot, dry winds from the E.S.E.,§ which usually continue three or four days, called by the Portuguese lestè. The southerly wind which is experienced in the South of Europe, and is called by the Italians the sirocco, is, to a certain extent, the analogue of the lestè, and yet differs from that wind in certain marked qualities. Whereas the sirocco is hot, moist, and relaxing, the lestè is hot, dry, and of a stimulating nature. It is the general impression that this wind comes from Africa, and that there—as the simoon—it gathers up the sand from the arid deserts and deposits it on the seas and islands to the westward. Darwin attributes the dust which is constantly falling near the Cape de Verde Islands to the wear and tear of volcanic rocks on the coast of Africa. Maury, however, gives a different interpretation to the origin of the microscopic organisms constituting this red dust. "This dust, when subjected to microscopic examination, is found to consist of infusoria and organisms whose habitat is not Africa, but South America, and in the Southeast trade wind region of South America. Professor Ehrenberg has examined specimens of sea dust from the Cape de Verdes and the regions thereabout, from Malta, Genoa, Lyons and the Tyrol; and he has found a similarity among them as striking as it would have been had these specimens been all taken from the same pile. South American forms he recognizes in all of them; indeed, they are the prevailing forms in every specimen he has examined.*" Without entering on the arguments which Maury introduces to prove his theory of the circulation of atmospheric currents—all of which may be read in his book—*we* are only interested to know that, in the neighborhood of Madeira, the lower current, which constitutes the lestè, comes from the East, and that, during the few days of its continuance, it replaces the moist atmosphere by one of a very dry character. The condition of the lestè air is, by no means, too dry for a certain proportion of invalids resorting to that Island—in fact, many are in the habit of expressing their improved condition during its continuance, and desire to live in a perpetual lestè—or otherwise, in a uniformly warm and equally dry atmosphere. It needs but a moment of reflection to convince one that a person who improves in Madeira under the lestè is, by no means, a fit person for the Island, but should, at once, seek some drier climate; on the other hand, those who feel languid and oppressed under its influence are those who are most likely to be benefited by remaining in a position where the atmosphere is, for the most part, uniformly warm and moist, just the climate, in fact, which Madeira offers. It is still farther natural to infer that those invalids who find themselves benefited by the blowing of the sirocco in the South of Europe would be much relieved by a prolonged residence in Madeira, where they will find a mild and moist condition as the normal state of the atmosphere, and the reverse.

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* Bennett: Winter and Spring on the Shores of the Mediterranean. London. 1870.

† Gourlay: Natural History of Madeira. Lond. 1811.

‡ Grabham, op. cit.

§ Heineken; Philos. Maga.

* Maury: Physical Geography of the Sea. New York. 1857.

The annual rain fall of Madeira is placed at 29 inches. There are, however, considerable variations—in some years, the whole amount has not reached 20 inches, and, in others, it has exceeded 40; but an amount, between 25 and 30 inches, may be looked for with tolerable certainty.[*] The rains are of the character generally noticed in semi-tropical countries. In October, it occurs in occasional heavy showers; November and December are generally interspersed with rainy days; the month of January is often without rain, and is, perhaps, the driest and pleasantest month of the year; February is uncertain; March usually brings much fine weather; April and May are spring months, with occasional showers; June is almost invariably cloudy; July, August and September are cloudless months of unbroken sunshine. Even in the winter season, however, there are few consecutive rainy days, and very few in which an invalid need be altogether confined to the house. During January and February snow generally falls upon the mountains, but is seldom seen below 3000 feet above Funchal, and never below 2500 feet. In reference to the humidity of Madeira, the Island is almost invariably bathed in an atmosphere containing aqueous vapor in a considerable quantity, and subject to little variation; and, to the constant presence of this agent, the uniformity of Madeira weather is considerably due. It is only necessary to notice the exuberance of growth of ferns[†] and other moisture-loving plants, the rapid deliquescence of certain salts, &c., to prove the general moisture of the atmosphere. This statement purposely excludes all tangible fogs, mists and clouds; although the mountains are seldom divested of their curtain of clouds, and they are constantly seen at sea to be resting over the Island, they do not, at any time, descend to the level of Funchal or other portions of the Island frequented by visitors, or indeed below 2000 feet from the level of the sea. The hygrometric condition of the Madeira atmosphere has been observed by many persons by means of Dr. Mason's[*] hygrometer, the inventor of which spent a year in Madeira, and his observations are found to agree substantially with more modern records. The work of Dr. Mason contains much valuable information on the Island, especially in relation to its meteorology.[†] In Funchal the humidity, taking the mean of the year, is 76, "the most agreeable amount of humidity to healthy persons being when the relative humidity is between 70 and 80 per cent."[‡] I obtained the same result by the use of the hygrodeik in Madeira, and a remarkable correspondence existed between the observations on the Island and a series of some 150 observations made to the eastward of the Gulf Stream, while making the voyages to and from Madeira. The atmosphere of the Island is more moist than in our own country, though perhaps not more so than in England—at the same time, the atmosphere is, at no time, damp, understanding, by that term, that moisture and chilliness which we often experience in New England.

With this review of the physical peculiarities of Madeira, we are ready to see the opinions expressed by writers on climate in regard to its adaptability to the cure of disease.

"Dr. Fothergill, who wrote so far back as 1775, and Dr. Gourlay, in 1811, both adduced proofs of the mildness and equability of the climate of Madeira, and its beneficial effects on pulmonary diseases. Till the late Dr. Renton, however, brought the subject before the medical profession, in a paper published in the *Edinburgh Medical and Surgical Journal* in 1817, its advantages were not generally known in England. The observations of Dr. Heineken, published in the *Medical Repository* in 1824, have placed Madeira, as a winter resort for invalids, above any other spot in the northern hemisphere. That the climate of Madeira can prolong life, even under very unfavorable circumstances, the case of Dr. Heineken himself will afford a sufficient proof. This gentleman repaired to Madeira in 1820, when his case was pronounced by some of the most acute physicians in Britain to be rapidly approaching to a fatal termination; nevertheless, he managed to live in comparative comfort for nine years. His death was ultimately occasioned by exposure while returning from the adjacent Island of Porto Santo in an open boat. * * * * Dr.

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[*] Grabham: Op. cit.

[†] Brown: List of the Ferns and Fern allies of Madeira and Porto Santo. Proc. Boston Soc. Nat. Hist.

[*] Records of General Science, vol. iv.

[†] Mason: a Treatise on the Climate and Meteorology of Madeira: London. 1850.

[‡] Parkes: Practical Hygiene.

Renton, who, at his request, performed the autopsy, expressed himself astonished how he could have sustained life with so small a portion of his respiratory organs, there being scarcely a vestige of one lung remaining, and the other was in a condition which would not have allowed him to exist in England."*

Sir James Clark, in his work on climates, says:—"When we take into consideration the mildness of the winter and the coolness of the summer, together with the remarkable equality of the temperature during the day and night, as well as throughout the year, we may safely conclude that the climate of Madeira is the finest in the northern hemisphere. There is no occasion for a person throughout the winter in Funchal, to breathe, night or day, within doors, an atmosphere below the temperature of 64°; or in the country, during the summer, at such a height as to ensure dryness, above that of 74°"†

Dr. Lund, an English physician who practised for several years on the Island, after giving certain numerical facts regarding the condition of consumptives in England, and referring to the occasional natural cure of the disease, says:—"Experience has proved that persons coming, for various periods of time, to such a climate as Madeira, in the early or, occasionally, in the advanced stages of the disease, have their complaints arrested, when they have the prudence to conjoin proper regimen and treatment with the effects of climate. In all stages the most distressing symptoms are, almost invariably, so much ameliorated as to cause comparatively little inconvenience, and where this relief does not occur, the case is an exception to the general rule. Even in the most advanced stages, the downward progress of the disease is much retarded, all the distressing symptoms ameliorated, and the patient has the great advantage of freely inhaling a balmy atmosphere out of doors, which gives much relief. The great majority are thus enabled to pass with comfort their remaining term of life, and can generally take out-door exercise, or sit in a garden, till a day or two before finally sinking. This affords a great contrast to what the invalid suffers at home, where, being necessarily confined within doors and deprived of many enjoyments, he passes through a long and dreary winter in an artificially heated atmosphere. * * * * No means as yet discovered can compensate for a natural, mild and pure atmosphere, affording opportunities of regular daily exercise."*

Dr. Mittaier, who studied the climate of Madeira on the spot for three years, says:—"It is my opinion that Madeira offers in combination the chief climatic conditions which are indispensably necessary to the recovery of invalids. Notwithstanding what I have said, the question still remains unsolved, whether the best possible place of resort for invalids has yet been discovered; for perhaps even a better place than Madeira may be found. In the mean time, however, Madeira certainly deserves the physician's most attentive consideration."

The late Dr. Andrew Combe, writing to a friend, says:—"*If I must go abroad*, I shall most likely return to Madeira, on the simple ground that, if I must forego the pleasures of home, it is better to resort at once to the *most* advantageous climate than to adopt the half measures of going to Italy, Jersey, or the south of England."†

A brief mention of the diseases likely to be benefited by a residence in Madeira must close the subject.

The great advantage of Madeira, as already stated, is its uniformity of temperature and the mildness of the atmosphere—desiderata which we are the farthest from attaining in the variable and inconstant climate of the Northeastern United States. In all those cases of lung diseases due to congestion, in acute or chronic inflammation of the bronchi, very little relief can be looked for where excessive changes of heat and cold, of wet and dry are continually taking place, as with us, and, still more, in those happy accidents of "curable consumption" which we are confident sometimes take place, where tubercles, and, perhaps, cavities have existed, we can hardly look for such results here. "Again, where one part of any organ is prevented by disease from doing its duty, it becomes doubly imperative that the remaining portion of healthy structure, which has double work to perform, should be placed under as favorable circumstances as possible for the more efficient discharge of its increased functions; hence the necessity of a constant supply of pure air, when only a limited part of the lung is acting. These circumstances show that, if a change is to be made, it should be to some decidedly good climate, possessing advantages sufficient to repay the invalid for the sacrifice he undergoes in leaving the comforts of home. In my own case, I acted, many years ago, according to this advice, and with the best results. * * * * In addition to those suffering from chest complaints, there are other classes of invalids who are much benefited by a sojourn in Madeira; such as those laboring under morbid conditions of the blood and the diseases arising from this state—rheumatism, scrofula, kidney affections and various chronic diseases, imperfect recoveries after fevers, and those who cannot resist cold and consequently suffer from internal congestions and imperfect action of the skin. Persons suffering from affections of the brain and nervous system or a tendency to apoplexy, asthma, chronic diarrhœa and dysentery, should not be sent to Madeira."[*]

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* White: Madeira, its Climate and Scenery: Edinburgh. 1857.

† Clark: Op. cit.

* White: Op. cit.

† Combe: Life and Correspondence.

"It is not too much to say that persons *threatened* with phthisis, who are marked with the general evidence of a consumptive tendency, but in whom the disease is not yet locally manifest, invariably escape after one or two winters in this climate. In the latter stages of consumption, a residence in Madeira is by no means powerless, and by it life is often prolonged and rendered comfortable in the most hopeless cases. * * * Of the stages or degrees of consumption likely to be most benefited by the climate of Madeira, all physicians who have hitherto practised here agree in recommending its trial in a very early period of the disease, as that in which the greatest amount of good may be expected. My own experience also leads me to concur in the view that cases of this kind almost invariably derive benefit. * * * In the more advanced stages of consumption a patient is placed, at Madeira, in circumstances which powerfully second a judicious and careful plan of treatment. He is able *at once* to secure the advantage of some kind of open-air life and exercise; and moreover he is, to a very great extent, secure from the collateral complications of an inflammatory character, whether of bronchitis or pleurisy, which are so often known to constitute secondary lesions of much gravity and direct causes of acceleration in the progress of mischief. In the less severe of these cases the disease is not unfrequently arrested, and in very many life is much prolonged. * * * * It is by no means unusual to receive persons in extreme sickness, whose cases had been deemed hopeless at home, and to find that they eventually revive. The earliest climatic influences in such cases is to be observed in the control of hectic fever, nocturnal perspiration and cough; and those have the best prospect of amendment whose tendency to a fatal termination is by successive attacks of bronchitis, pneumonia or pleurisy, and also by the gradual advance of exhausting debility."[*]

One must not look for a sudden or very marked improvement, certainly at first; indeed, the patient should be satisfied if the first few months or the first year show no advance, but only an arrest of the disease. Nature must be the curative agent. Madeira and all similar places merely furnish to the patient the most advantageous circumstances for nature to act, by enabling him to live quietly in the enjoyment of a mild atmosphere. "I would strongly advise every person who goes abroad for the recovery of his health, whatever may be his disease, or to whatever climate he may go, *to consider the change as placing him merely in a more favorable situation for the removal of his disease.* * * * * All the circumstances requiring attention from the invalid at home should be equally attended to abroad. * * * * It is in truth only by a due regard to all these circumstances that the powers of the constitution can be enabled to throw off or even materially to mitigate in the best climate a disease of long standing."[†]

A few additional remarks on the conveniences for invalids which Madeira offers may serve as a guide to those seeking the Island. Madeira has so long been a resort for English invalids that it has accumulated all those necessaries and luxuries of life which are essential to the comfort and well being of the sick, and the visitor need fear no deprivation of home comforts which his forced exile might seem to deprive him of. Excellent hotels, with good food and beds, exist in Funchal. Perhaps the best is that of Mr. and Mrs. Miles, whose kindness and devotion to their patient-guests are remembered by their visitors both from America and England. The price of board at the best houses is low. Persons desiring greater quiet can easily obtain furnished apartments or entire houses (quintas) at moderate rates. Servants accustomed to the ways of English travellers can be obtained, who, if desired, take entire charge of domestic arrangements.

As the climate of Madeira is mild, such clothing as is worn by us in the early summer is most appropriate. Almost every article of wearing apparel can be obtained in the shops of Funchal, of a fair character and at a reasonable price. Thin underclothing is at all times desirable, and the prudent invalid would hardly fail to provide a change of warm clothing, in case of a *possible* period of cooler weather. Excellent horses with attendants (burriqueros), ox sledges, &c., are provided by the landlords. A frequent method of conveyance is by a hammock borne on the shoulders of men, and, in this manner, the feeblest invalid is enabled to get air on every fine day. The more hardy invalids find abundant amusement in making excursions to various parts of the Island; scientific observers find occupation in studying the Fauna and Flora of a region of great interest. The gardens of the hotels, the streets of the city and the shops, filled with the beautiful productions of the Island, are favorite lounging places for the less hardy invalids. But very few books can be procured in Madeira. The libraries of the English clubs, however, are easily accessible on proper application. Dr. Grabham and Dr. Brandt, skilful and attentive English physicians, and Dr. Pitta, an eminent Portuguese physician, with others of less note, offer their services to visitors. Good medicines can be procured in Funchal. Services according to the forms of the Church of England and of the Free Church of Scotland are held each Sabbath day in appropriate chapels.

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[*] White: Op. cit.

[*] Grabham: Op. cit.

[†] Clark: Op. cit.

NICKEL PLATING.

Translated from the Union Médicale, by W. F. M.

Mons. Dumas showed the Academy numerous specimens of a new branch of industry for which he predicts great success. Dr. Isaac Adams, of Boston, has succeeded in fixing upon metals, by a simple process, a coating of pure nickel.[*] The metals thus *nickelled* have a natural polish which is obtained by simply rubbing with a piece of cloth. The nickel is very hard, and offers a strong resistance to atmospheric and acid influences. In this manner all objects of daily use can be prepared: household utensils, saddlery and plates for engraving. The secret consists in submitting to the galvano-plastic process a double solution of a salt of ammonia and nickel; the other alkaline solutions of soda and of potash do not allow the separation of the pure nickel, and the slightest traces of soda or of potash left with the nickel prevent its adhesion.

Bibliographical Notices.

The Science and Art of Surgery, being a Treatise on Surgical Injuries, Diseases and Operations. By John Eric Erichson. From the fifth enlarged and carefully revised London edition. Illustrated with six hundred and thirty engravings on wood. With additions by John Ashhurst, Jr., A.M., M.D. Pp. 1228.

This standard surgical work has been remodelled. The necessary additions to embody an account of the more important recent advances in the science of surgery have been generally distributed through the various subjects of which it treats.

The chapter on ophthalmology was written by Mr. Streatfield, one of the ophthalmic surgeons of the University College Hospital. The size of the book has been increased, including Dr. Ashhurst's additions, nearly three hundred pages; the American publisher presenting, by means of an enlarged page, the two volumes of the English edition in one, making a good looking but cumbersome book. In other respects it does not vary from the fourth edition.

Bellevue and Charity Hospital Reports. 1870. New York: D. Appleton & Co.

A volume of four hundred and fifteen pages; well printed on good paper and illustrated. We give a list of the papers, want of space preventing a notice of each.

On Amputation of the Cervix Uteri in certain forms of Procidentia, and Remarks on the complete Eversion of the Cervix Uteri. By Isaac E. Taylor, M.D.

On the Analytical Study of the Pulmonary Physical Signs furnished by Auscultation and Percussion. By Austin Flint, M.D.

On Entire Excision of the Os Calcis. By F. A. Burrall, Jr., M.D.

On the Serious Consequences which result from the neglect of Slight Injuries of the Ankle-joint; illustrated by Cases. And A Method of Dressing Fractured Clavicle. By Lewis A. Sayre, M.D.

On the Diagnostic Characters, Mechanism and Pathological Significance of the Mitral Direct or Obstructive Cardiac Murmur, and on the occurrence of a Tricuspid Direct Murmur. And On the Mode of Obtaining the Venous Hum, and the value of this Physical Sign. By Austin Flint, M.D.

Cases illustrating Strangulated Abdominal Hernia, with other Abdominal Hernia not Strangulated, of unusual character, &c.

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[*] This process is mentioned in the B. M. and S. Jour. in the No. for Feb. 4, 1869, page 13.—Ed.

&c. In all, seventy-three examples, accompanied with practical remarks. By Frank Hastings Hamilton, M.D.

A Clinical Report based on an analysis of one hundred and two Cases of Bright's Disease of the Kidney. By Austin Flint, M.D.

Amputations performed at Bellevue Hospital. Compiled by F. J. Metcalfe.

Report of Cases of Anæsthesia at the Bellevue Hospital, with the use of a new Inhaling Apparatus. By D. H. Goodwillie, M.D., D.D.S.

Report of the Pathological Department of Bellevue Hospital. By J. W. Southack, Jr., M.D., E. G. Janeway, M.D., and Francis Delafield, M.D.

On some of the Effects of Excessive Intellectual Exertion. By William A. Hammond, M.D.

The History of nine Cases of Ovariotomy. By T. Gaillard Thomas, M.D.

Gouge on Ventilation. A Book for the Household. New York: D. Van Nostrand. 1870.

THIS is a book of 170 pages, attractive in appearance, but throwing no new light upon the important subject which it professes to treat. It is an elaborate advertisement of the well-known method of inducing an upward current of air in a shaft by the application of the heat of an Argand burner. Only this, and nothing more.

The book is made up of certificates to the value of the plan of Mr. Gouge, and a great mass of disjointed extracts from newspapers, and well-known treatises on the general subject of ventilation, many of them very good in themselves, but utterly incoherent. The frontispiece, which is a drawing of the ascending flue or gas burner, tells the whole story, including the important fact that the apparatus is patented. D.

Reports of Medical Societies.

AMERICAN MEDICAL ASSOCIATION.

FIRST DAY.

THE twenty-first annual meeting of the American Medical Association convened Tuesday morning, May 3d, at Lincoln Hall. At the last annual meeting of this body it was determined to hold their meetings in the city of Washington every alternate year, and at other places as may be agreed upon. The last annual meeting was held at New Orleans. At this convention the general business will be restricted to the morning sessions, and at the afternoon sessions all reports and papers will be submitted relating to particular branches of medicine in the following order:—Chemistry and Materia Medica; Practical Medicine and Obstetrics, Surgery and Anatomy, Meteorology, Medical Topography and Epidemic Diseases, Medical Jurisprudence, Hygiene, Physiology and Psychology, and each section to choose its own officers and make its own rules of order. There are about four hundred delegates present, representing most of the State associations and medical schools throughout the country.

At 11 o'clock, the meeting was called to order by the President, Professor George Mendenhall, of Cincinnati, Ohio, with Prof. Wm. B. Atkinson, of Philadelphia, Secretary. Prof. F. G. Smith, of Pa., and L. A. Sayre, of N. Y., John S. Moore, of Mo., Warren Stone, of La., Vice Presidents, were invited to seats on the stand. Prayer was offered by Rev. C. B. Boynton.

Dr. Antisell, chairman of the committee of arrangements, made a report extending to the delegates a hearty welcome, and congratulating the convention on the large representation from the Southern States, which had for so long a time been so sparsely represented. [Applause.] He hoped, from the varied interests connected with this convention, that much good would be accomplished. In conclusion he read the programme for the evenings' business, during the session of the Convention:—Tuesday—Reception by the President of the United States, at 8, P.M. Wednesday—Reception by the Surgeon General at the Army Medical Museum from 7 to 10, P.M.; Surgical Lecture in the lower hall at 8, P.M.; Microscopical Lecture in the lower hall at 8¾, P.M. Thursday—Reception by Mayor of Washington, Hon. S. S. Bowen, at 9, P.M. After which the roll of membership was called.

The Committee on credentials submitted their report, in which they state that they have excluded the delegates from the National Medical Society, D. C.; American Academy of Medicine, D. C.; Howard University Medical College; Alumni Association of Medical Department Georgetown College; also the three hospitals in this city. The reason assigned is their consultation with colored physicians. They number, in the aggregate, about twenty-five. (The rejected delegates, with a number of those from Northern States to the American Medical Association, held a meeting last night and expressed their indignation at the course of the Committe on Credentials.)

The following minority report was made by Dr. Robert Reyburn, the Chairman of the Committee on Credentials :—

The undersigned respectfully protests against the admission to the approaching session of the American Medical Association of the delegates from the Medical Society of the District of Columbia for the following reasons, viz. :—

These delegates represent a society which, in open defiance of the ethics of the American Medical Association, for the fee of ten dollars, issues licenses to practise medicine in the District of Columbia to homœopathic and other irregular practitioners.

This Society is also irregular, and violates the ethics of the American Medical Association by claiming and exercising the power to grant licenses to practise medicine in the District of Columbia, to persons who are not graduates of any respectable medical college, for the fee of ten dollars.

The undersigned also respectfully protests against the admission to the next session of the American Medical Association of the delegates from the so-called Medical Association of the District of Columbia, for the reason that said Association is composed of the same individuals that form the Medical Society of the District of Columbia ; in fact, it only settles the fee bill and local ethics of the medical profession of the District, and can in no sense be called a medical organization entitled to representation in the American Medical Association.

No medical papers, essays, or pathological specimens are printed at its meetings, and it is in fact only an ingenious device by which the Medical Society of the District of Columbia is enabled to duplicate its number of delegates in the American Medical Association.

The undersigned also respectfully calls attention to the number of delegates claiming to represent the medical profession of the District of Columbia. The total number of regular physicians in the District is about two hundred, which would give about twenty delegates, and yet it will be seen that the District delegates number about sixty-four, which is evidently unfair, and gives the District a much larger representation than it is justly entitled to.

The undersigned having already filed a written protest with the Committee on Credentials, for the reasons above given, respectfully recommends that the following gentlemen, delegates from the Medical Society of this city, be refused admission to the approaching session of the Association, viz. :—R. K. Stone, T. Miller, J. C. Hall, G. W. Bulkley, A. B. Drinkard, W. G. Palmer, T. A. Ashford, W. W. Johnson, J. T. Young, S. C. Busey, J. M. Toner, W. P. Johnson, T. Antisell, C. E. Hagner, A. F. A. King, M. V. B. Bogan, W. H. Combs, D. W. Prentiss and W. E. Roberts.

For reasons as above he respectfully recommends that seats also be refused in the approaching session of the association to the following named gentlemen, delegates from the so-called Medical Association of the District, viz. :—C. H. Lieberman, D. K. Hagner, William Lee, J. C. Riley, Grafton Tyler, W. Butt, Joseph Walsh, N. S. Lincoln, J. W. H. Lovejoy, Thomas F. Maury, Louis Ritchie, W. H. G. Newman, Armstead Peter, H. B. Triste, Aaron Miller and George R. Miller.

The undersigned reports favorably upon the credentials of, and recommends that seats be granted to, the following named gentlemen, delegates representing the various societies and medical institutions of the District, viz. :—

From the Alumni Society, Georgetown College—W. Evans, E. McNally, F. O. St. Clair, G. A. Fitch, R. S. L. Walsh, Charles Allen.

Columbia Hospital, Washington, D. C.—J. H. Thompson.

Georgetown College, D. C.—Johnson Elliott, Noble Young.

Section of Medicine and Hygiene, American Academy of Literature, Science and Art—W. D. Stewart, D. W. Bliss, T. B. Hood, G. T. Johnson.

Smallpox Hospital, D. C.—A. T. Augusta.

Washington Asylum—S. H. McKim.

Freedmen's Hospital—Charles B. Purvis, B. G. Glennan.

Howard University Medical College, D. C.—S. L. Loomis, R. Reyburn.

National Medical Society, Washington, D. C.—H. W. Sawtelle, A. W. Tucker, J. E. Mason.

Clinopathological Society—H. A. Robbins, O. M. Muncaster.

National Medical College, D. C.—A. Y. P. Garnett, J. F. Thompson.

Providence Hospital, D. C.—G. M. Dove, C. M. Ford.

The undersigned in conclusion respectfully protests against the arbitrary and illegal conduct of the majority of the members comprising the Committee on Credentials in refusing credentials to delegates from medical institutions which have been hereto-

fore represented in the American Medical Association, and apparently objecting to them solely on partisan and political grounds.
ROBERT REYBURN, M.D.
Member of Committee on Credentials,
American Medical Association

Dr. N. S. Davis, of Chicago, rose to a question of order, that the report should be made without any remarks.

After debate it was decided to hear the report without any remarks.

Dr. Reyburn then proceeded to read his report, rehearsing his history of the troubles in the Medical Colleges in this city on the color question.

After its reading a motion was made to refer the report to the Committee on Ethics without instructions; carried.

A motion was made to refer the majority report to the same committee; carried.

Dr. Stewart, of Washington, submitted a protest against the report of the Committee on Credentials, and on motion it was referred to the same committee.

[There is a good deal of feeling in the Convention on this color question.]

Dr. Busey, of the District of Columbia, presented a protest signed by many physicians against the admission of Dr. C. C. Cox, of Maryland, as a representative from that State; which was referred to the Committee on Ethics.

Dr. Cox rose to reply, but Dr. Davis, of Illinois, rose to a point of order that these individual grievances should be settled by the Committee on Ethics.

Dr. Cox came to the stand and attempted to be heard, but the Convention refused to hear him.

Dr. Martin, of Mass., said that a part of his delegation had been excluded by the Committee on Credentials, and he moved the subject relating thereto be referred to the Committee on Ethics; carried.

Dr. Davis moved that all similar subjects be referred to the Committee on Medical Ethics, which was carried.

Dr. Davis said all delegates had a right to take part in the proceedings of this convention until it be shown that they have no right to vote.

Dr. Sayre, chairman of the Committee on Ethics (and one of the Vice Presidents of the association), said a pamphlet had been published and circulated by Dr. Ruppaner injurious to his character, and asked that the subject be referred to a special committee.

Dr. Davis moved that a new Committee on Ethics for the ensuing year be appointed, to which this subject shall be referred; carried, and the following were appointed: Alfred Stillé, of Pa.; N. S. Davis, of Ill.; J. N. Keller, Ky.; H. F. Askew, of Del.; J. J. Woodward, U. S. A.

The committee then retired to consider the matters referréd to it.

The President, Professor George Mendenhall, then proceeded to deliver the annual address to the convention, which was listened to with much interest during its reading.

A vote of thanks was tendered to the President of the Association for his able address, and a copy requested for publication.

The committees on Cultivation of the Cinchona Tree; the Cryptogamic Origin of Disease, with reference to recent microscopic investigations on that subject; the Doctrine of Force, Physical and Vital; Variola; the Relative Advantages of Syme's and Pirogoff's Mode of Amputating at the Ankle; a National Medical School; Commissioners to aid in Trials Involving Scientific Testimony; Climatology and Epidemics; Veterinary Colleges; Medical Ethics; American Necrology; To Memorialize State Medical Societies; Nomenclature of Diseases; Medical Education; Medical Literature; Prize Essays, submitted their reports, and the committees were discharged.

Dr. Thomas Antisell, D. C., read a paper on Veterinary Colleges, suggesting that attention should be given to the health of domestic animals, as 90,000,000 horses, mules and other animals were sick and dying throughout the land; referred to the Committee on Publication.

Several members moved that the meeting adjourn, and secure a more appropriate hall, as it was impossible to hear the speakers at the stand.

After some debate the motion was temporarily withdrawn, in order to dispose of sundry papers which had been submitted to the appropriate committees.

A recess was taken, in order to afford the State organizations time to select a nominating committee from each State for officers for the ensuing year.

After re-assembling, the Chair announced the following gentlemen as Committee on Nominations :—Alfred Stillé, Pa.; Dr. G. C. B. Nottingham, Ga.; H. F. Askew, Del.; H. Carpenter, Oregon; S. C. Busey, D. C.; J. A. Murphy, Ohio; C. M. Carleton, Conn.; E. W. Jenks, Mich.; J. Rea, Ind.; R. F. Michel, Ala; E. P. Lankford, Mo.; A. N. Talley, S. C.; J. E. Manlove, Tenn.; J. L. Atlee, Penn.; S. M. Bemiss, La.; J. N. Keller, Ky.; J. J. Cockrell, Md.; C. A. Lee, N. Y.; G. S. Palmer, Maine; F. J. Haywood, Jr., N. C.; G. C. McGregor, Texas; H. Nance, Ill.; —— Haxall, Va.; O. Bullock, R. I.; —— Barber, Iowa; A. B. Stuart, Minn; M. Creeg, U. S. A.; —— Steinriede, Miss.; Dr. H. W. Brock, W. Va.

Dr. C. C. Cox, of Maryland, moved that the name of Dr. Busey, of the District of Columbia, be stricken out of the list of delegates until such time as the Committee on Ethics should report relative to the District of Columbia.

Dr. Busey said that Dr. Cox was not a delegate from the State of Maryland. It would be time enough to exclude him after the Committee on Ethics had made a report.

Dr. Cox moved that the whole subject of choosing permanent officers be laid over until the Committee on Ethics had reported.

A motion was made that the opposing delegations from the District of Columbia be permitted to go out and in some convenient place fight out their difficulty and settle it. [Laughter.]

The Chair stated that the committee on nominations would meet in this hall at 4 o'clock this evening.

SECOND DAY.

The Convention was called to order at 9.30, A.M., by Prof. George Mendenhall, President; Wm. B. Atkinson, Secretary.

Dr. Gross, of Philadelphia, said that it was his opinion that they should have a social reunion annually, to be held on the third day after the convening of the Association. He, therefore, moved that the social reunion be held at the Arlington House this evening at 8.30, P.M. Carried, and a committee of five was appointed to make arrangements for the social meeting.

Dr. T. Antisell, of the District of Columbia, then read a list of members by invitation.

Dr. Alfred Stillé, of the Committee on Medical Ethics, then read a partial report relative to the Massachusetts Medical Society, by which their delegates were admitted to seats in the convention, and recommending them to eject from their Society all who were not what are considered by the Association as regular practitioners.

Dr. H. R. Storer and Dr. Sullivan, of Massachusetts, had been admitted the night before. They subsequently protested against admitting the Massachusetts Medical Society delegation, on the ground that the Society had forfeited their representation by enrolling homœopaths and quacks generally among its own members. The subject having been referred to the new Committee on Ethics, they spent three hours in considering it and finally reported as above.

There is a small row in the Massachusetts delegation, growing out of Dr. Storer's differences with the State Medical Society.

Dr. Bemiss, on the part of the Nominating Committee, made a report of the number of States represented.

On motion, the paper read by Dr. Antisell on Tuesday was reconsidered.

Dr. —— offered a motion that the subject be referred to a committee of three; it was so ordered.

The Secretary read a paper charging Dr. C. C. Cox with a violation of the code of ethics; which was referred to the Committee on Ethics.

Dr. Cox endeavored to explain, but was forced to desist on account of the noise.

On motion, five minutes were given to Dr. Cox to make an explanation. He said that he had bought a license from the Medical Association of this city, but he had never received the said license; that this was the reason he was not a member of the Medical Society. And further, that he had never importuned any Senator on any subject whatever, as had been charged upon him.

Dr. Palmer asked leave to make an explanation, but the Association would not hear him.

Dr. Davis, of Illinois, hoped that no discussion would be allowed.

Dr. Antisell reminded the Association that they were to be entertained this evening by Mayor Bowen.

Dr. W. H. Mussey, of Ohio, then offered a resolution that the Committee on Ethics be instructed to meet and report immediately upon the subject of the admission of members now before them. Not approved.

Dr. Loomis, of Delaware, offered a resolution that all the members from the District of Columbia be admitted. He had been a member of a college that graduated negroes, and that was the reason why he was not admitted. The resolution was not concurred in.

Several members objected to any persons voting who were not members.

A division was called for, and the resolution of Dr. Loomis was lost by a vote of 107 yeas to 142 nays.

Dr. Cox, of Maryland, moved that no delegates from the District be admitted until the Committee on Ethics report. Carried.

Dr. Yandell, of Kentucky, moved that the Medical Society of the District of Columbia be blotted utterly out from the map of the Medical Association.

Dr. White, of New York, protested against any such motion, and moved that the motion be laid upon the table. Carried. [Confusion.]

Dr. F. G. Smith, of Pennsylvania, chairman of the Committee on Printing, made a report, giving a detailed account of the work of the Committee for the past year. The work, he thought, had been very satisfactory, and the Committee deserved the thanks of the Association. The report was received.

An amendment was made to the report, that all the matter hereafter ordered to be printed be stereotyped.

Dr. Gross, of Pennsylvania, made an amendment to the amendment, that the transactions of the Association be published in an American medical journal issued monthly.

Dr. White, of New York called for a division.

Dr. Stewart moved a reconsideration. Carried.

After some further debate the original report was received, and the amendment of Dr. Gross referred to a special committee of five. The whole was then referred to the special committee above named.

The Secretary submitted the annual report of the Treasurer, which was referred to the Committee on Publication.

A communication was read from the British Medical Association to Dr. Gross, complimenting the American Association upon their success. Referred to the Committee on Publication.

Dr. T. Antisell here arose to a question of privilege. He then read from a pamphlet, the subject of which had been taken from the *Chronicle* of Wednesday. He denounced the statements referred to as unfounded in fact, and objected to the circulation of any paper whatever, and especially any of a political import, in the hall.

Dr. Davis, of Illinois, moved that hereafter all papers be excluded from the hall. Carried.

The regular business was then taken up.

Dr. R. Reyburn, of the District of Columbia, from the Committee on Library, read the annual report of the Librarian. Received and referred to the Committee on Publication, and the bills ordered to be paid.

Dr. Sayre, Chairman of the Committee on Ethics for 1869, moved that all papers in the hands of the old committee be referred to the new committee, and the old committee be discharged.

Dr. T. Antisell, of the Committee of Arrangements, then made a report of the members who have arrived since the opening of the convention.

The Committee on Medical Literature (Dr. J. J. Woodward, United States Army, Chairman) submitted a report, which was referred to the Committee on Publication.

Dr. Birch, of New York, moved that the motion of Dr. Gross, in reference to a supper to be given at the Arlington, be reconsidered. Carried and tabled.

Dr. C. C. Cox, Chairman, submitted a report from the Committee on Medical Necrology. Referred to the Committee on Publication.

Dr. Moore, of Missouri, U.S.A., presented the following resolution:—

"*Resolved*, That no medical man shall deliver an efficient course of lectures under a price to be decided by this Association."

Dr. Moore said that the irregular practices of the Western colleges imperatively demanded some such action to save the profession from disgrace, and if they adopted the resolution they would elevate the profession to its proper standard.

Dr. Davis, of Chicago, opposed the resolution. He thought it was impracticable for the Association to fix a standard of charges for the medical colleges of the country. He did not wish the Association to vote against the resolution; but he wanted appended to it a law stating what should be the standard of work to be done for the money paid.

Dr. Moore, of Missouri, stated his object was to fix a minimum price. Those colleges which had the grade might charge as much as they pleased. The Doctor claimed that this course would promote competition, and would so elevate the standard of colleges and make more uniform what is termed an efficient course of lectures.

Prof. McNaughton, of New York, spoke against the resolution.

Dr. Selden moved that $100 be the sum named to fill the blank left in the resolution offered by Dr. Moore.

The motion was then put in the form of a resolution, which excluded any or all delegates from colleges who received a fee less than $100.

An amendment was made to include the alumni of such institutions.

Dr. Yandell, of Kentucky, spoke to the resolution at length, opposing any fixed price as detrimental to the progress of the profession. He contended that circumstances altered cases, and prices also. Dr. Yandell then touched upon the standard of education. He was in favor of English, but opposed to Latin and Greek requirements.

The remarks of Dr. Yandell were listened to with the greatest attention.

It was then moved that the resolution be laid on the table; which, after some further discussion, was so ordered.

Dr. Sullivan, of Massachusetts, moved that the actions of this Association should be made final for five years from this date.

Dr. Johnson, of Missouri, revived the question of stated fees, and spoke at some length in favor of the said fees being regulated by the American Association. They had tried a convention of colleges, that they might help themselves, but they would not do it. He therefore hoped that the Association would take the matter in its own hands.

After some further discussion, the motion of Dr. Sullivan was laid on the table.

Dr. Collins, of Massachusetts, presented the following resolution:—That the charge for medical examination for life insurances should be not less than $5. Adopted.

Dr. Horner, of Virginia, introduced a resolution regulating physicians' fees. Rejected.

Dr. Sullivan, of Massachusetts, presented a resolution to the effect that the Medical Association have power to control medical education throughout the United States. Passed.

Dr. D. A. O'Donnelly, of Maryland, offered a resolution that a committee of three be appointed to report on the evil of abortion in a proper light to the society, and to consider some means whereby to expel all such as practised abortion from the association. And further, denouncing in the most unqualified manner, all who indulged in this abominable practice. Passed.

The Committee on Nominations then reported the following named officers for the ensuing year.

President—Alfred Stillé, Pennsylvania.

Vice Presidents—J. S. Wetherly, Alabama; Henry Gibbons, California; J. T. Hurd, Texas, Samuel Willey, Minnesota.

Assistant Secretary—Dr. J. C. Tucker, of California.

Treasurer—Dr. Casper Wister, of Pa.

Librarian—Dr. F. A. Ashford, D. C.

Committee of Arrangements—Chairman, Dr. A. N. Sawyer; J. C. Tucker, Shurtleff, Holman, Murray, U. S. Army; Simmons, Cal.; Carpenter, Oregon; Morrison, Nevada.

Committee on Publication—Drs. F. G. Smith, Pa.; W. B. Atkinson, Pa.; J. C. Tucker, Cal.; F. A. Ashford, D. C.; Casper Wister, Pa.; H. F. Askew, Del.; Wm. Mayberry, Pa.

Committee on Prize Essays—T. M. Logan, Cal., chairman; H. Gibbons, H. H. Toland, Beverly Cole, Cooper Lane, Cal.

Place of meeting, San Francisco, Cal.

Time of meeting, first Tuesday in May, 1871, at 11, A.M.

The report was received and adopted, and a resolution passed, that its next place of meeting be at San Francisco, on the first Tuesday in May, 1871.

Dr. Maddox inquired of the Chair what disposition had been made of the delegates from the District of Columbia, and asked information relative to their right to seats in the Association.

The Chair informed him that all the delegates from the District of Columbia had been excluded.

Dr. Maddox then moved a re-consideration of the vote by which the District of Columbia delegates were excluded.

The motion was not considered, as the whole matter had been referred to the Committee on Medical Ethics.

The Association then took up the consideration of the constitution, to which several amendments were proposed.

Before proceeding to vote on the constitutional amendments, a resolution was offered which excluded from seats all delegates who had received appointments from permanent medical colleges, hospitals, lunatic asylums, and from the American Medical Society at Paris, France; that those only should be admitted who had received their appointments from some society in good standing.

A motion was made to lay the resolution on the table.

It was also moved that members "by invitation" be excluded.

Considerable discussion ensued upon the resolution and the motion, when, on motion of Dr. Hibberd, the whole matter was postponed for further consideration.

Dr. Alfred Stillé, of Pennsylvania, chairman of the Committee on Ethics, submitted a partial report, recommending that Dr. C. C. Cox be admitted as a delegate from Maryland, as the charges brought against him were too vague to receive the consideration of the committee.

Dr. Keller, of Ky., submitted a minority report from the Committee on Ethics, recommending that Dr. C. C. Cox should not have a seat as a representative from Maryland, as he was a resident of Washington, and moved its adoption.

After considerable discussion, the majority report was adopted.

The Secretary then read the titles of a number of papers for the consideration of the several Sections; after which the Convention adjourned to 9, A.M., Thursday morning.

We are requested to say that the members of the Medical Society of the Alumni of Georgetown College were not excluded because of their holding consultations with colored men, but they were not allowed full representation on the grounds of the Society not being of a local character.

Visit to the Medical Museum.—Wednesday evening the Association met, according to programme, in the U. S. Army Medical Museum, on Tenth Street. The entire Association, members and delegates, were present, many of whom were accompanied by ladies. The early part of the evening was spent in examining the objects of interest in the museum, which was highly praised by the visitors.

At 8 o'clock the Association adjourned to the lower hall, from which the desks had been removed and accommodations made for the comfort of those present to listen to lectures from Drs. Otis and Woodward, of the United States Army.

Dr. George Otis was the first speaker. His lecture was on the Excision of Joints, from wounds, of which he exhibited many illustrations, in which the operations had been successful and the patients recovered. The lecture of Dr. Otis was of great interest, and was listened to very attentively.

Dr. J. J. Woodward then followed with a lecture on "Electric Lights," in which he illustrated the power of the artificial lights over the sunlight for micro-photography. Dr. Woodward was frequently interrupted by applause, as the excellence of the illustrations impressed them.

After the lecture of Dr. Woodward the audience adjourned to the Museum, where the examination of the specimens continued until a late hour.

[The temper of a large majority of the delegates was averse to springing the colored question, but they were firm in their determination not to admit to seats in the body any of the delegates of the local medical associations that affiliated with colored physicians.]

THIRD DAY.

The convention was called to order at 9.30, A.M., President Mendenhall in the chair; William B. Atkinson, secretary.

Dr Antisell then read the names of a number of gentlemen who were admitted as members on invitation.

Dr. Sayre asked that a committee be appointed to examine the charges circulated against him through the country. He requested that a special committee be appointed to report on the matter at this session.

Dr. —— said that there being a difficulty between Drs. Sayre and Ruppaner, he objected to any committee being appointed, because the other party was absent.

Dr. Murphy, of Ohio, moved that the whole matter be referred back to the society at New York.

Dr. Sayre said that it was due to the Association that these charges be looked into.

Dr. Murphy said that the reputation of Dr. Sayre was not damaged in this society, and he therefore insisted on his motion.

Dr. Keller, of Kentucky, reported on the part of the Committee on Ethics that that committee had been forced by the press of work to return the papers in the case of Dr. Sayre for the further consideration of the Association.

Dr. Maddox moved that the whole matter be laid on the table. It was so ordered.

Dr. Yandell then moved that the delegate that had been sent as a representative to the British Medical Association be heard.

Dr. Pinkney, United States Navy, representative of the American Association in England, made a long and interesting report of his visit and observations to the medical schools of Britain. The report was listened to with much attention throughout.

A vote of thanks was tendered Dr. Pinkney, and the report referred to the Committee on Publication.

Dr. F. G. Smith, of Pennsylvania, chairman of the Committee on Nomenclature, submitted a report of the names of diseases, accompanied by a resolution recommending the adoption of the nomenclature of diseases prepared by the Royal College of Physicians at London.

Dr. A. Underhill, of New York, also read a paper on the same subject, which was laid on the table.

The resolution recommended by the committee was discussed at some length by Drs. McDaniels of Alabama, Logan of Louisiana, and others, who all held that revision of the nosological tables now in use was imperative.

The report, with resolution as recommended, was adopted.

Dr. C. C. Cox offered a resolution, which was adopted, for the appointment of a special committee to wait upon the Surgeon General of the United States and to request the privilege of duplicating the photo-microscopic slides of the tissues, so admirably executed by the indefatigable industry and skill of Surgeon J. J. Woodward, to be prepared under the direction of said committee, and distributed at a fair price to such medical colleges and institutions as may desire their use.

Dr. Bemiss, of Louisiana, from the Committee on Nominations, reported the additional standing committees for the ensuing year, which report was adopted.

Dr. Antisell offered a resolution of thanks to the Surgeon General, United States Army, for the beautiful and instructive exhibition of last evening, and recommending Dr. Woodward and Dr. Otis to the consideration of the Secretary of War as worthy of promotion for their efforts to advance medical education in the military service.

Dr. C. C. Cox offered a resolution of condolence with the family of the late Alden March, of New York, and that a copy of the same be sent to Dr. March's bereaved family. The resolution was concurred in.

Dr. Steine, of New York, offered a resolution that the State and county authorities be requested to aid in the support of veterinary colleges in each of the States by appropriations or otherwise. Adopted.

Also, that one or more veterinary surgeons be associated with other physicians in the boards of health when they are appointed by the Governors. Lost.

Also, that veterinary surgeons be appointed to the army with the rank of full surgeons, and also in the Agricultural Department.

Dr. Otis moved as a substitute that the first clause relating to appointments of veterinary surgeons to the United States Army be stricken out, and that the Government appoint a veterinary surgeon to the Agricultural Department, with a suitable salary. Adopted.

The hour for special business having arrived—

Dr. Storer, of Boston, moved, upon behalf of the Gynæcological Society of that city, that the action of the Association in 1869, condemnatory of cards by specialists in journals of a strictly medical character, should be rescinded upon the ground of abstract right and long custom with reference to the insertion of such cards. Tabled.

A resolution was offered that a committee of three be appointed to wait upon Congress and request them to regulate the quarantine laws. Adopted.

The report from the delegate to the Canadian Medical Association was received and referred to the Committee on Publication.

The report of the Committee on Communications was adopted, and the committee continued.

Dr. Stewart, District of Columbia, offered a resolution that gentlemen not members of the Association were not eligible to serve on its committees. Tabled.

A resolution was offered regulating the duties of superintendents of hospitals. Adopted.

A resolution was offered that as certain so-called medical works had been published which were injurious to the reputation of the profession :—

Resolved, That any person signing his name as author of such work shall be refused membership in this Association. Adopted.

Dr. Jones, of the District of Columbia, submitted a tabular statement relating to the medical institutions and colleges throughout the country, embracing much valuable and interesting information, which, after being read, was referred for publication.

It was resolved that at the future meetings of the Association a dinner should be given on the third day of the convention, at the expense of the members eating the dinner.

Dr. Mussey, of Ohio, offered the following :—

Resolved, That that clause in the by-laws which provides that every alternate meeting of the Association be held at Washington be repealed, and that in the future the place of meeting should be determined at each session of the Association.

The resolution was concurred in.

Dr. Kerwin, of Pennsylvania, then read a lengthy report on the treatment of the insane, which was received and referred to the Committee on Publications.

Dr. White, of Buffalo, offered a resolution that the different medical schools of the country establish chairs on mental disorders. Adopted.

The Committee on Prize Essays submitted a report, which was adopted.

A resolution was offered that a committee be appointed to report what, if any, legislative means could be taken to prevent the spread of epidemic diseases. Adopted.

Dr. C. C. Cox inquired if the Committee on Ethics would make any further report on the weighty matters before them.

Dr. Antisell called attention to a paragraph from the *Chronicle* of yesterday morning, charging the Committee of Arrangements with certain actions that should be denounced by the Association. He denied the charges and asked the Association to sustain the committee in its actions.

On motion, it was decided to postpone the further consideration of the subject until after the report of the Committee on Ethics had been received.

Dr. N. S. Davis, of Illinois, then submitted, on behalf of the majority of the Committee on Ethics, the following

REPORT.

It appears that the matters reported to your Committee of Registration, and so much of the action of the majority of same committee as relates to the same subjects, embraces the three following subjects :—

First. A charge that the majority of the Registration Committee had refused to register the delegates presenting credentials from several societies, colleges and hospitals in the District of Columbia which claimed the right to representation.

Second. Direct charges against the Washington Society and the Medical Association of the District of Columbia, accompanied by a protest against the admission of delegates from those bodies.

Third. Direct charges, which had been lodged with the Committee of Registration, against the National Medical Association of the District of Columbia, accompanied by a protest against the registration of delegates from that Society, and from such other institutions as were supplied with medical officers who were members of that Society.

In regard to the first charge, your committee find on investigation that the Registration Committee have duly registered all the delegates from all the medical institutions claiming representation in the District of Columbia in accordance with the usages and by-laws of the Association, except the Medical Society of the Alumni of Georgetown College, the National Medical Society, the Howard Medical College, the Freedmen's Hospital, and the Smallpox Hospital, these being the institutions included in the charges already mentioned in the third specification.

It remains, therefore, only to consider the second and third specifications, and your committee ask leave to report on these separately. In relation to the second, we unanimously recommend the following resolution :—

Resolved, That the charges offered by Dr. Reyburn, as a minority of the Committee on Registration, against the Medical Society and the Medical Association of the District of Columbia, are not of a nature to require the action of the American Medical Association, the first charge referring to a duty imposed on the Society by an act of Congress, and the second referring to a matter which does not come in conflict with any part of the Code of Ethics.

Resolved, That so far as relates to the Medical Society of the Alumni of Georgetown College, it has been shown to us that the Society has sixty resident members, and is therefore entitled to six delegates, instead of as requested by the committee.

In regard to the third proposition, relating to the National Medical Society, Howard University Medical College, the Freedmen's Hospital, and the Smallpox Hospital, we recommend the following :—

Resolved, That the duties of the Committee of Arrangements, so far as relates to the registration of members, is purely clerical, consisting in the verification of the certificates of delegates and a report on the same. If credentials in proper form are presented from any society or institution, professing such few as would make it *prima facie* in the list of institutions enumerated in the constitution of the Association as entitled to representation, but against which charges have been made or protests presented, the names of the delegates presenting such credentials, together with the charges or protests in the possession of the committee, should be represented to the Association for its action.

Resolved, That the charges lodged with the Committee of Arrangements against the eligibility of the National Medical Society of the District of Columbia have been so far sustained that we recommend that no member of the Society should be received as a delegate at the present meeting of this Association.

N. S. DAVIS.
H. F. ASKEW.
J. M. KELLER.

Dr. Alfred Stillé, of Pennsylvania, then submitted the following as a

MINORITY REPORT.

The undersigned, members of the Committee on Ethics, while subscribing to the greater portion of the report of the majority, feel it their duty nevertheless to dissent from the final resolution recommending the exclusion of the members of the National Medical Society of the District of Columbia from the present meeting of this Association; they offer, therefore, in lieu of that resolution, the following :—

Whereas the institutions excluded from representation by the action of the Committee on Credentials, viz., the National Medical Society, the Howard Medical College, the Freedmen's Hospital, and the Smallpox Hospital, are regularly organized as the constitution of the Association requires; and whereas the physicians so excluded are qualified practitioners of medicine who have complied with all the conditions of membership imposed by the Association; and whereas in the judgment of the undersigned no sufficient ground exists for the exclusion of such institutions and physicians from this Association; therefore,

Resolved, That the institutions above named are entitled to representation, and that the physicians claiming to represent them are entitled to seats in the American Medical Association. ALFRED STILLE,
J. J. WOODWARD.

Motions were made to accept and reject the different reports, when, amid the greatest excitement, the yeas and nays were called for.

Dr. Howard, of the District of Columbia, asked who of the District were entitled to vote.

The Chair then decided that those gentlemen were entitled to vote who had been unanimously admitted by the Committee on Ethics.

Dr. Cox endeavored to speak, but, amid cries of "sit down," was forced to desist.

An appeal was taken from the decision of the Chair, which was not sustained, the vote being 115 for and 90 against.

The Secretary began to call the roll upon the question of laying the minority report upon the table about 1.30, and continued until 2 o'clock, when the Secretary announced the vote—yeas 107, nays 85. The minority report was accordingly tabled.

Great excitement prevailed throughout the calling of the names.

A motion was made to adopt the majority report.

Dr. C. C. Cox, of Maryland, then addressed the Association, protesting against its action in rejecting the minority report, and gave a brief history of the origin of the differences of opinion now existing among the several societies of the city. Dr. Cox, during his address, was frequently called to order.

The question on the adoption of the majority report was then called, but it was thought to be unnecessary, as the rejection of the minority report adopted it.

Reception at Mayor Bowen's.—In the evening the Medical Association visited the capitol for the purpose of seeing the dome lighted, with which operation they all expressed themselves much gratified. The Association, *en masse*, then called upon Mayor Bowen, filling the entire house to such an extent that anything more than a formal reception was impossible. The evening, however, passed off very pleasantly.

FOURTH DAY.

The Association assembled Friday morning at Lincoln Hall, Prof. George Mendenhall in the chair, and Prof. W. B. Atkinson, secretary.

A resolution was offered by Dr. J. J. Woodward, United States Army, that the Surgeon General be requested to authorize Dr. Woodward to make copies of his photomicroscopic slides, to be distributed at a fair price to such medical colleges and institutions as may desire their use. Adopted.

A debate then occurred on the duties of the Committee on Ethics in the matter of passing on the credentials of delegates representing institutions which admit women to the practice of medicine.

Professors Hartshorn, Bell, Davis, Maddox and Cohen participated in the debate, after which the matter was indefinitely postponed.

Dr. Palmer, of Maine, offered a resolution of inquiry as to why the Howard Medical College had been excluded from admission in this Association, stating that the institution had been chartered by special act of Congress, and was recognized all over the country as a first-class college.

A discussion took place on the adoption of the resolution.

Dr. N. S. Davis, of Illinois, said if the resolution was withdrawn he, as chairman of the Committee on Ethics, would give his reasons in writing why the institution was excluded.

The resolution was withdrawn.

Dr. R. J. O'Sullivan, of New York, then offered the following:—

Whereas apothecaries are accustomed to renew medicines prescribed by physicians without due authority from the physician, thereby doing much injury to patients, and by which many lives have been destroyed; and as apothecaries are unwilling to discontinue the practice except by a general action:—therefore

Resolved, That this Association take such action as will bring about the discontinuance of the practice.

Referred to a special committee.

A protest against the adoption of Dr. Pinkney's report of the medical corps of the navy was submitted, and after some debate was laid on the table, and the whole subject referred to a committee of three, to report at the next meeting of the Association.

The Committee on Ethics made reports on several cases relating to charges against individuals and colleges in the different States, and they were referred to appropriate committees.

A paper was read on the treatment of the insane; which was referred to the Committee on Publication.

Dr. Hartshorn, of Philadelphia, offered a resolution that the constitution be so amended as not to exclude women from membership of this Association. Laid on the table.

Dr. Powell, of Atlanta, Ga., offered a resolution that the Association do not recognize any college or institution against which charges are pending.

It was opposed by Dr. Reyburn, of the District of Columbia, and advocated by Dr. Powell, after which it was laid over, under the rules.

Dr. Lee offered a paper on insane institutions, which was referred to the Committee on Publications.

A paper on epidemic diseases was read and referred.

A vote of thanks was tendered to Mayor Bowen for entertaining the Association at his residence on Wednesday night.

A motion was made that the next meeting of the Association be held in San Francisco, California, in June, 1871.

A resolution declaring Dr. Horace Wells, of Boston, the discoverer of anæsthesia, was adopted.

A resolution of thanks was tendered to Dr. Mendenhall for the able manner in which he has presided over the deliberations of the Association.

Dr. John Sullivan, of Massachusetts, offered the following:—

Resolved, That no distinction of race or color shall exclude persons claiming admission to this Association who are duly accredited thereto.

During its reading the speaker was met with a storm of hisses, which compelled him to stop. Cries of "go on," "go on," were heard, and he said he would do so when the serpents became quiet. He then finished its reading, and was allowed to speak seven minutes. He spoke as follows:

SPEECH OF DR. JOHN SULLIVAN.

Mr. President and Gentlemen of the American Medical Association: I rise to offer a resolution, which I venture to affirm is one of the most important which has ever been presented for the consideration of this body. The importance of this resolution to an American national medical association can hardly be exaggerated, inasmuch as its passage or the reverse involves many of the highest questions in social science and political economy. Eminently proper it is that this resolution should receive due consideration from the representatives of so many of the scientific bodies of a country whose territorial limits embrace half a continent, and every variety of climate, soil, and race; a country where, by the fusion of so many different nationalities, a homogeneous race is in gradual process of formation, and an entirely new civilization is being step by step evolved. Gentlemen, the resolution is this: "*Resolved,* That no distinction of race or color shall exclude from this organization any person duly accredited thereto." Gentlemen, in moving this resolution I present in its abstract form the question which in reality underlies the controversy we are this day called to decide. This is a scientific body, gathered from every section of country. We have met to deliberate upon purely scientific subjects; to determine questions of purely scientific character—questions which concern not only our own welfare, but the welfare and perpetuity even of mankind. I will not, however, deny that, in part at least, this association was organized for social purposes, but its main objects are those which I have indicated. Now, is there one gentlemen present from the North, South, East, or West, who would hesitate to admit to this floor the duly accredited representative of any scientific body, organized by any race under the sun, no matter what might be the color of his skin, provided it were not black?

Why is it, gentlemen, that you ostracize no qualified persons save those of this one color? Why do you entertain an inveterate hostility to the Ethiopian being represented here, and yet, as we all believe, make no objection whatever to those whose complexion betrays their origin from some one of the other four great divisions of the human family? For my part, I am satisfied that our friends from the South greatly mistake the nature of their feelings toward the negro. There is a mass of living evidence which renders irresistible the conclusion that however much they may dislike the black man, toward the black woman they entertain, many of them, the liveliest feelings of our nature. But to return; comparatively speaking, there is nothing in our present state of existence of real value save ideas. The mind, meaning therewith to include not only the intellect but the affections, is that which constitutes the man, the man made in the image of his Maker, endowed with godlike attributes of intelligence and destined for an endless existence. All the other attributes of humanity are but mere accessories of the mind, all else hastens rapidly to decay—"Shadows are we, what shadows we pursue." The question before us, then, is purely of qualification, of capacity; it is a question of education, a question of intelligence, intellect, in short, gentlemen, of *brains*, *brains*, *brains!* Intellect is at once the evidence and the seal of manhood.

"The *skin* is but the guinea's stamp;
A man's a man for a' that."

For my own part, I would not refuse to admit to the deliberations of this great scientific body, provided he came duly accredited thereto, an ourang outang with a tail ten feet long; and could he show me an interesting case of disease of that tail, I should be very ready to examine that case with him, and to receive all the light which his experience could shed upon it. I would say to him "God speed" in his effort to heal on scientific principles the diseases of his brother babboons. But I am told, gentlemen, and you may be told, by our brethren from the South that it is the social element of this organization which lies at the bottom of their opposition to the admission of the African to this floor. As one of them has said to me, if Julius Augustus Cæsar presents his credentials and becomes entitled to a seat here, we must meet him, not only on this floor, but elsewhere—at the Mayor's reception, or at any other place where we meet as gentlemen for recreation or for social intercourse with each other. He may bring with him his wife and children, and we may bring with us our wives and children, and *they* will have to meet on terms of social equality Mrs. Cæsar and all the little Cæsars. And this, say gentlemen from the South, is a bitter pill to swallow. It *is* a bitter pill to swallow, I admit; but is it any worse, any harder, any more humiliating, any more cruel for *you* than it is for *us?* Are not we, too, Caucasians? Do we ask you to taste the cup which we are not ourselves forced to drain? Who and what are *you* more than *we?* There is as good blood in New England as there is in the South, in Massachusetts as there is in Kentucky. Two hundred and thirteen years ago, this year, if I rightly remember the date when he landed on these shores, my original ancestor in this country first planted his feet on New England soil. Who is he (pointing to Dr. Yandell, of Kentucky), Gentlemen from the South, in God's name, who are *you* who dare to affirm that to meet the African on terms of social equality is a harder thing, a more humiliating thing for *you* than it is for *us?* No, gentlemen, the dose we compel you to take is one which we must ourselves swallow. And now, gentlemen, inasmuch as the political status of the African is one with yours and mine; now that he is admitted to the Senate chamber of the United States; now that he may stand there at least on terms of social equality, and in the presence of the Chief Magistrate of this country, let not this great scientific body, embracing, as it does, with but few exceptions, the wisest men in our profession; I repeat, let not this great scientific body prove itself unworthy of the high trusts confided to its charge. Let us not deny to the enfranchised African the same rights in the Republic of letters which are now fully and cheerfully accorded to him in the political organization under which we live. Let us not deprive him of the opportunity which the sword has opened for him of proving to the civilized world, if he can do this, that inasmuch as he displays the essential qualities of manhood, he has a right to be accounted and treated as a man.

During the delivery of the above speech, great confusion reigned, and had it not been for the persistent efforts of Dr. Yandell, of Louisville, Ky., at one time surgeon-in-chief of Kirby Smith's army, Dr. S. would not have been able to have concluded his remarks. During their delivery Dr. Yandell appealed to the sense of the convention to allow him to proceed, stating that he was a southern representative, but that he desired fair-play, and trusted that Dr. Sullivan would be heard.

Upon the conclusion of Dr. Sullivan's remarks, Dr. N. S. Davis, of Chicago, read the following

REPORT OF THE COMMITTEE ON ETHICS.

In reply to the resolution of the association calling upon the majority of the Committee on Ethics for the reason why they in their report exclude the delegates from the Medical Department of Howard University, they respectfully state that there is nothing in the report which directly excludes delegates from the said University or any other medical institution in the District of Columbia, except the National Medical Society.

The resolution on this subject, reported by the committee, is in these words:—

"*Resolved,* That the charges lodged with the Committee of Arrangements against the eligibility of the National Medical Society of the District of Columbia have been so far sustained that we recommend that no members of that society should be received as delegates at the present meeting of the association."

It will be seen that the only parties excluded from admission as delegates at the present meeting are the members of the National Medical Society. If the Medical Department of Howard University had chosen to send any delegates who are not members of that society there is nothing whatever in the report to prevent them from being received.

In the papers referred to your Committee on Ethics were a list of charges with specifications in the usual form against the registration of the National Medical Society. These charges may be clearly stated as follows:—

1. That said National Medical Society recognizes and receives as members medical men who are not licentiates, and who are acting in open violation of sections 3, 4 and 5 of the law of Congress constituting the charter of the Medical Society of the District of Columbia.

2. That a large part of the members of the National Medical Society are also members of the National Medical Association of the District of Columbia, and are openly and freely violating the rules and ethics of the Association to which they have subscribed.

3. That they have both in its capacity as a society and by its individual members misrepresented the action of the Medical Society and the Medical Association of the District of Columbia, and used unfair and dishonorable means to procure the destruction of the same, by inducing Congress to abrogate their charter.

Each and all of these charges were, in the opinion of the majority of your committee, fully proved by the members of the National Medical Society themselves, who appeared voluntarily before your committee as witnesses. Therefore, if we have any regard to the maintenance of the laws of the land on the ethics of our medical organization, the undersigned could not come to any other conclusion than was expressed in the last resolution recommended by the majority of the Committee on Ethics.

Dr. Robert Reyburn rose to reply to the report, but was called to order, as not being a member. Finally the Convention allowed him five minutes to speak.

Dr. Reyburn said that he had never violated the code of ethics, and had favored the admission of colored men to the college to which he belonged. No man should be excluded on account of color. His resolution had not been received by the old society, and he was now a member of the National Medical Society. If that constituted a violation of the code of ethics he pleaded guilty. Last year he had been chairman of the Committee on Credentials at New Orleans, and when about to make his report he was shamefully treated by the Committee of Arrangements.

Dr. Antisell denied the assertion.

Dr. Loomis, of the District of Columbia, stated that he was a member of the Faculty of Medicine of Howard University, and he could see no reason why he was excluded. He then offered a resolution to the effect that the members of the Committee on Ethics who signed the majority report be censured for so doing.

His resolution was laid on the table.

Dr. Johnson, of the District of Columbia, President of the Medical Society of the District of Columbia, then proceeded to give a detailed history of the difficulties existing in our local societies. He also stated that Dr. D. W. Bliss had violated the rules of ethics by having his name printed on a bill of fare at Willard's Hotel.

Dr. Bliss denied its having been placed there with his knowledge.

Drs. Johnson, Busey and Marbury sustained the charge by statements.

After which Dr. Busey replied to certain statements of Dr. Johnson, and read the sixteenth rule of the Code of Ethics, showing that the code had been violated in the attempt to force the colored man upon the society. This was what had caused all the trouble. Dr. Borrows had been instrumental in bringing about the color difficulty. He denied that politics was the cause of the difficulty, as had been stated by Dr. Cox.

The vote was then taken on Dr. Sullivan's resolution, and it was tabled by a vote of 106 yeas to 60 nays.

Dr. H. R. Storer, of Boston, offered the following:—

That, inasmuch as it has been distinctly stated and proved that the consideration of race and color has had nothing whatever to do with the decision of the question of the reception of the Washington delegates, and inasmuch as charges have been made in open session to-day distinctly attaching the stigma of dishonor to parties implicated, which charges have not been even denied by them, though present; therefore

Resolved, That the report of the majority of the Committee of Ethics be declared as to all intents and purposes unanimously adopted by the Association.

The resolution was adopted by a vote of 112 yeas to 37 nays.

The Association then adjourned *sine die.*

The following was the report of the Committee on Ethics, to which was referred the protest by Drs. Storer and Sullivan, on behalf of the Gynæcological Society of Boston, against the representation of the Massachusetts Medical Society.

"Whereas the charge of tolerating in the Massachusetts Medical Society men acknowledged to have become homœopaths and eclectics is fully proved and is plainly in violation of the Code of Ethics; but, inasmuch, as it also appears, that the parties making the charges here, being themselves members of the same Society, have not previously made or caused to be made, any specific charges against such irregular practitioners in the proper form before the Massachusetts Medical Society or its councillors; it is the opinion of the Committee that such steps should have been taken and the results obtained before appealing to this Association, and

It is therefore recommended: that the Committee of Registration should register all regularly accredited delegates from the Society to the present meeting. This Committee further recommend that, unless said Society takes the necessary steps to purge itself of irregular practitioners, it ought not to be entitled to further representation in this Association. ALFRED STILLE,

"*Chair'n Com. on Ethics.*

"GEO. MENDENHALL,

"*Pres't Am. Med. Association.*

"*May* 3, 1870."

Copied by R. S. HODGDON, R. AMORY, } *Delegates.*

Medical and Surgical Journal.

BOSTON: THURSDAY, MAY 12, 1870.

DEATH OF SIR JAMES Y. SIMPSON.

IT becomes our melancholy duty to announce the death, on Friday last, of Sir James Y. Simpson. Beneath the pall which covers his bier are hidden all differences of opinion—all earthly competition. A mind comprehensive in its grasp, original in suggestion, fertile in resource, and of unbounded activity, has ended a career of rarely equalled brilliancy, and passed into the silence of the grave.

DR. H. I. BOWDITCH, of this city, leaves this week for London, where private affairs demand his sojourn for some months. Physicians sending their patients abroad will be glad to know that Dr. B. is willing to be consulted while there in his special department of the profession. He will take apartments in the neighborhood of Charing Cross.

WE resign our Editorial space this week to give room for the report of the proceedings of the American Medical Association. We have compiled our report from various sources. The following comments from the daily press we quote by way of holding "the mirror up to nature" *in disease.*

AMERICAN MEDICAL ASSOCIATION.—Our reports show the action of this Association yesterday. Nothing but personal observation in Lincoln Hall would give an idea of the excited condition of that very respectable assembly when the question arose in reference to admitting colored physicians to membership. It seemed like a bursting bomb, like a torch in a powder magazine.

It will be recollected that there is a bill awaiting its turn on the calendar in the Senate of the United States repealing the charter of the old Medical Society of this District for a gross violation of its provisions. This bill passed the Committee on the District of Columbia unanimously, and was reported to the Senate by Mr. Sumner, where it will unquestionably pass by a heavy majority. This marked rebuke of that Society ought to make its members judicious in their behavior. But "whom the Gods would destroy they first make mad." Instead of endeavoring to conciliate the feelings of their brother practitioners from other States, these men have contrived to insult them in all their intercourse. Their arrogance has finally culminated in an attempt to exclude all delegates from the District of Columbia who are loyal to the flag of their country. A majority of the Committee on Credentials belong to the old Society, having been appointed last year at the meeting in New Orleans. Without giving any other reason than that of membership in the new Society of the District, which is composed entirely of loyal physicians of high standing, the Committee refused to receive the credentials or even give them a hearing. Several prominent physicians were grossly insulted when they offered their credentials. They excluded the delegates from the National Medical Society of the District of Columbia; from the Alumni Association of the Medical Department of Georgetown College; from the Howard University Medical College; from our three great hospitals, and the American Union Academy of Science, Literature and Art. All of those delegates were honest supporters of the Government of the United States during the war. But they admitted the delegates from the old Society and Association, including many who served in the rebel army during the late war, together with the Surgeon-General of the late Confederate army.

This outrage was all the more flagrant taking place in the National Capital. In order to obtain a large delegation from the Southern States, letters and circulars were sent South during the past month urging every Southern delegate to come here to "keep out the niggers." Three colored physicians, who are regular graduates of medical colleges, and professors in Howard University, are delegates, and this caused the entire disturbance. They are finely educated men, and yet were rejected by the old Society when they applied for membership, on account of their color. They are now denied admission to the American Medical Association for the same reason.

The wheels of progress will roll on, and grind to powder all those who try to stop its progress by such subterfuges. It is no use in this part of the nineteenth century to attempt such folly. A learned convention of such distinguished men would cover themselves with shame and disgrace to allow their prejudices to govern their judgment in such a matter. They are legislating for a new and reconstructed country to-day, where slavery does not exist, and where prejudices of caste should be forgotten.

Their brethren of the medical profession, one of the noblest and most useful, look for broad and liberal action. If they are disappointed in this, there will be another convention held which will represent the great and growing States of the North. It will prove the death-knell of the American Medical Association.—*Washington Daily Chronicle*, May 4.

THE ARISTOCRACY OF THE MORTAR AND PESTLE.—The Medical Association had a lively time this afternoon about affairs in this district, and for an hour or more the proceedings were similar to those of a ward meeting when political excitement runs high. The honorable doctors indulged in shouting, cheering, jeering, hissing, applauding, after such fashion as rarely prevails among those who profess to be gentlemen, and it was evident enough that the effort to get delegates here who are opposed to negro physicians did not fail. The question of color, as has already been stated, was involved with several other questions, and the final vote can of course be based on some one of these other issues, but every body understands that but for the presence of the colored man there need have been no feeling and no excitement in determining the matter presented. Delegates from four or five hospitals or organizations were excluded by twenty-two majority, and among them were all the colored men. It is therefore settled that the American Medical Association this year declines to give its hand to the negro doctor.—*Boston Daily Advertiser.*

SIR JAMES Y. SIMPSON'S ILLNESS.—The *Union Médicale* says that after taking a strong dose of chloral for insomnia caused by his rheumatic pains, Professor Simpson was seized with "anginiform" symptoms (*angina pectoris*) and was confined to his bed. The fond hope expressed by our French cotemporary that the anxiety felt for the result would be replaced by joy at his recovery, has been sadly blasted.

FRACTURED RIBS IN A LUNATIC.—Another death of a lunatic patient with fracture of four ribs and various bruises on different parts of his body! This case occurred at Hanwell Asylum, and has been investigated by Dr. Diplock, the Coroner for West Middlesex, and a jury, who came to the conclusion that death was the result of natural causes. The patient was a man in weak health, suffering from paralysis of the bladder. He was admitted into Hanwell on February 26th. He was carefully examined on admission, and then bore no marks of injury. On March 28th, Dr. Hawkes, the resident Medical officer, was requested to see him, and found him lying on the mattrass in a padded room in an epileptic convulsion. The convulsions continued all day. Dr. Hawkes examined the man's chest, and found crepitation on the left side. He asked whether he had had a fall. The attendant answered in the affirmative. The man died on the following day unconscious. After death simple non-penetrating fracture of four ribs was found, with congestion of the lungs. The medical evidence was to the effect that the man had died from the epileptic attack, and on this the jury framed their verdict. It is difficult, however, to conceive that so serious an injury, and the congestion of the lungs which it probably caused, had no prejudicial influence in the case. The attendants gave evidence that the man, when seized with the fit, had fallen on a chair, although it does not appear that any attendant witnessed the fall. Be this, however, as it may, and without attributing acts of violence to the asylum attendants, which in other cases have been only too clearly proved, this case is one which, no less than the former ones, calls for an inquiry into the present management of our public lunatic asylums. In an asylum like that of Hanwell it ought to be simply impossible that a lunatic should fall down and break his ribs without any one seeing the fall or being present to prevent such an accident. One great means of reform would be the more careful selection and proper training of the attendants on the insane. No greater responsibility than the care of human beings who cannot take care of themselves can be put on any man, and yet the only qualification which is held to fit a man for an attendant on lunatics is at best the kind of canine trustiness which distinguishes a gaoler, and often simply the failure to succeed in any other employment. We believe that the Commissioners of Lunacy have not—or, at all events, do not—exercise the power of preventing the appointment at one asylum of an attendant who has already been discharged for misconduct from another.—*Medical Times and Gazette.*

M. Claude Bernard.—The Paris correspondent of the *Literary Gazette* gives an interesting sketch of this eminent physiologist:—

He was born at St. Julien, a small village near Villefranche, Rhone county, to which, unlike most Frenchmen (they are absolutely indifferent to their birthplace; M. Sainte-Beuve never once revisited his, although it is only a few hours from Paris; M. Theophile Gautier once revisted his native town, and remained there forty-eight hours), he is devotedly attached. He has added to the patch of vineyard his parents possessed, and now possesses quite a large vineyard. He regularly goes there to superintend the vintage, and remains there until he has sold his wine. He retains the friendship of his old playfellows and his parents' cotemporaries, and delights to grasp their hands when they greet him with "Good day, Bernard, how art *thou?*" To which he replies, "Thank *thee*, Frise, and *thou?*" M. Bernard's parents were extremely poor. His mother used to carry eggs to Villefranche to sell from door to door. She determined to give him a good education, and when he completed his studies she expressed a desire to see him enter a dry goods' shop. His good fortune, however, led him into an apothecary's shop. He became infatuated with chemistry, made rapid progress in it, had his attention turned to physiology, studied under Magendie, who took a fancy to him and pushed him up with all his influence. Two or three years ago M. Claude Bernard fell ill at St. Julien, and was confined to his bed for six months. His wife, who after her first visit positively refused to return to "that horrible hole," did not go to see him once during his long illness. He deeply felt this exhibition of indifference, and it is said to have been the last, the decisive wrong which led him to bring a suit for divorce. Two children, daughters, issued from this marriage. He is now a member of the Academy of Sciences and of the French Academy, a Senator, a Professor at the College of France and at the Garden of Plants, all of which places yield him an income of some $10,000 in gold annually.—*Med. & Surg. Reporter.*

The numerous friends of Dr. John E. Tyler, of the McLean Asylum for the Insane, at Somerville, will be gratified to learn that intelligence has been received from Charleston announcing a favorable turn of his disease. His physicians have strong hopes of his speedy recovery.

In boring an Artesian well in St. Louis, to a depth of 3,843½ feet, a curious circumstance in connection with the temperature was noted. The thermometer, which, at 3,000 feet, registered 106° F., fell when that depth was passed, marking but 105° at 3,800 feet.—*New York Medical Gazette.*

DEATHS FROM CHLOROFORM.

We have to chronicle the fact of another death taking place from chloroform. It occurred in University College Hospital, on the 13th inst., in a young man whose thigh was amputated by Mr. C. Heath.—*Medical Press and Circular, April* 27.

Medical Miscellany.

SMALLPOX.—This frightful disease is always among us, ready to propagate itself, by contagion, wherever its seed may find a receptive soil. In the twenty-seven years of registration in Massachusetts, 3,063 deaths from smallpox have been recorded. The number in a single year has sometimes risen to 300, and again has fallen to 12. In 1868, twenty fatal cases were reported. The price of public safety, as regards this dreadful pest, is constant vigilance on the part of the health authorities to make sure that the whole population is protected by vaccination.

We have so long enjoyed the advantages of this greatest of all discoveries in preventive medicine that the present generation is in danger of forgetting the horrors of the period when everybody was exposed to the peril of unmitigated smallpox. How complete is the protection through careful, systematic and thorough vaccination is made evident by the following facts. In Ireland, vaccination was made compulsory in 1863. Since that period the Irish Poor Law Commissioners have carried out the provisions of Law, and the whole population has been vaccinated. The results are seen in the following figures, from which it appears that the Irish physicians have banished smallpox from their Island as St. Patrick is said to have banished the snakes.

Whereas, in the periods 1830–40, 1840–50 and 1850–60, the respective annual average mortalities had been 5,800, 3,827, and 1,272, in the years 1864, 1865, 1866, 1867, 1868, they were 854, 347, 187, 20 and 19 respectively. In the first half of 1869 the whole number was three.

The deaths from smallpox in Ireland since 1866 have been so few that it is fair to suppose the cases have been generally imported from abroad. The population being about five and a half millions, we should have, if equally well protected, about four deaths a year in Massachusetts.

Our people need no more compulsion than that which the statutes have authorized for many years, and which public opinion has for the most part enabled our health and school authorities to enforce; but our watchfulness should never be relaxed against this insidious and terrible foe.—*Twenty-seventh Registration Report of Massachusetts for the year* 1868.

OUR New England homœopathic namesake, apropos of the appointment of a member of its school to be a "poor law medical officer" in Italy, and in rebuttal of the *Lancet's* objection that in that country a physician is forbidden to dispense his own medicine, is exceedingly jubilant over the idea "that the Italian law, like the Spanish, does not aim to include high attenuations among medicines." Had such a statement emanated from a perverse and bigoted journal of our own persuasion, we should have set it down as an almost too severe sarcasm; uttered by an authorized oracle of high potency, it impels us to inquire whether, after this confession, our homœopathic friends still entitle themselves "practitioners of medicine"?—*New York Medical Gazette.*

WE learn by recent advices from Cuba that smallpox is epidemic in Havana and vicinity.

TRANSFUSION was recently successfully performed in Ireland by Drs. Beatty, Colles, and McDonnell, in a case of uterine hæmorrhage, about ten ounces of blood being taken from the patient's husband.—*New York Medical Gazette.*

MEMBERS of the profession interested in Diseases of the Eye are invited to visit the Ophthalmic Clinique of the Boston City Hospital, at their convenience, on Mondays, Wednesdays and Fridays, from 9 to 11 o'clock.

HENRY W. WILLIAMS, M.D., *Oph. Surgeon.*

TO CORRESPONDENTS.—Communications accepted:—A Fragment of the Medical History of Boston—Prevention of Venereal Diseases—Regeneration of the Epithelium of the Cornea—Conium Maculatum—Report of Vermont Medical Association—A Physician's Problems; a Review—Review of O'Reilley Prize Essay.

PAMPHLETS RECEIVED.—Transactions of the Medical Society of the State of New York, for the Year 1869. Pp. 351. (From Wm. H. Bailey, M.D., Secretary.)—The Correlation of Vital and Physical Forces. By Prof. George F. Barker, M.D., Yale College. No. 2, University Series. Pp. 36.—Oxygen Gas a Remedy in Disease. By Andrew H. Smith, M.D., New York. Pp. 56.—The Relative Dangers of Anæsthesia by Chloroform and Ether, from Statistics of 209,893 Cases. By E. Andrews, A.M., M.D., Professor of the Principles and Practice of Surgery in Chicago Medical College. Pp. 12.—Spinal Irritation. By William A. Hammond, M.D., New York. Re-printed from the Journal of Psychological Medicine for April, 1870. Pp. 42.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending May 7, 1870.

Cities and towns	Number of deaths in each place.	PREVALENT DISEASES	
		Consumption	Pneumonia.
Boston	115	31	8
Charlestown	9	2	0
Worcester	19	7	0
Lowell	10	3	0
Milford	7	3	0
Chelsea	3	0	0
Cambridge	5	1	0
Salem	5	0	0
Lawrence	8	1	2
Springfield	6	1	0
Lynn	13	2	3
Fitchburg	7	2	0
Newburyport	4	2	0
Somerville	6	1	0
Fall River	10	0	1
Haverhill	2	1	0
	229	57	14

Worcester and Boston each report one death from smallpox. From all the above-named places there are reported ten deaths from croup, eight from scarlet fever, four from typhoid fever, and three from measles.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending May 7th, 115. Males 45—Females 70.—Abscess, 1—anæmia, 1—apoplexy, 2—congestion of the brain, 2—disease of the brain, 3—inflammation of the brain, 2—bronchitis, 4—cancer, 5—cholera infantum, 1—consumption, 31—convulsions, 4—croup, 3—cyanosis, 2—debility, 2—dropsy of the brain, 3—drowned, 1—scarlet fever, 5—typhoid fever, 3—disease of the heart, 6—infantile disease, 1—insanity, 1—disease of the kidneys, 2—congestion of the lungs, 4—inflammation of the lungs, 4—marasmus, 2—measles, 2—old age, 4—paralysis, 1—premature birth, 1—puerperal disease, 1—rheumatism, 2—scrofula, 1—smallpox, 1—stricture of the œsophagus, 1—teething, 1—unknown diseases, 5.

Under 5 years of age, 34—between 5 and 20 years, 14—between 20 and 40 years, 34—between 40 and 60 years, 11—above 60 years, 22. Born in the United States, 81—Ireland, 26—other places, 8.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

SIX CASES OF HERNIA.

By David W. Cheever, M.D., Boston.

Case I.—A healthy young man, of 21 years of age, had had oblique inguinal hernia into the imperfectly closed funicular process come on gradually, for several years. Two weeks previously he had begun to wear a truss. This was of the French pattern, with a triangular shaped, convex pad. One morning while at stool the rupture slipped down below the truss, and distended painfully the inguinal canal. He found himself unable to reduce it. This was at 10, A.M. Aided by a physician, whom he immediately sent for, persistent attempts at taxis were made, without ether.

When I first saw him, at 1½, P.M., three hours only after the incarceration of the rupture, I found a bubonocele of considerable size. It had not passed beyond the outer ring. The skin was as red over the tumor, abdomen and groin as we see it after the use of mustard. The tumor was œdematous and exquisitely tender; particularly where the internal ring arched over the sac. There had been nausea and colic. The tenderness and redness were not caused by any applications, but had followed the forcible and long continued taxis. It was evident that a simple lesion was rapidly becoming developed into a very serious condition. Under the circumstances, it was felt that a very moderate and brief taxis only was admissible. The patient assented to an operation, if a gentle taxis failed.

Ether was given; and the leg flexed upon the abdomen. The neck of the sac was gently squeezed and manipulated by the forefinger and thumb of the left hand, and the fundus pressed by the right hand. In about five minutes the bowel was emptied of its contents, and the rupture returned. A cold water dressing and spica bandage were applied. The patient received an opiate, and was kept in bed for two days. He made a good recovery.

Case II.—An unmarried lady of 35, who had long had a small femoral hernia, but had never worn a truss, was seized with symptoms of strangulation at 5, P.M. Her physician was sent for at 8, P.M., and found her with vomiting and colic. He used moderate taxis without avail. On seeing her with him at 9, P.M., after four hours of incarceration, I found a hard tumor in the femoral region, not larger than a hickory nut; not tender, nor inflamed. After etherization, the rupture was returned by taxis in about fifteen minutes. After vain attempts to squeeze out the contents of the bowel, the rupture was returned by the following manœuvre. The sac and tumor were firmly pressed downwards and backwards by the palm of the left hand; with the right hand a deep and forcible stroking upwards from the groin was made over the relaxed abdomen. By this means the inner end of the incarcerated coil of intestine was drawn out of the crural opening, and the rupture returned. She was well the next day, and had a spontaneous operation from the bowels. A femoral truss was applied.

Case III.—A lady of somewhat over 40 years, quite stout and fleshy, had had a little bunch come and go in the groin for several years without knowing its character. She was suddenly attacked with diarrhœa and tenesmus. Following these expulsive efforts the lump re-appeared in the groin and remained there. She now had violent colic around the umbilicus, and persistent nausea and vomiting. The diarrhœa abruptly ceased. Concealing thoughtlessly from her physician the existence of a tumor in the groin, these symptoms went on for two days, with partial relief from opium. Colic persisting, a mild laxative was given, and immediately rejected by the stomach. At the instigation of a female friend, who thought the lump in the groin might have some bearing on the case, the physician was finally told of its existence, and immediately examined, and diagnosticated a hernia.

On seeing her with him, soon after, we found a small, rounded, hard tumor, very deep in the femoral region, and much obscured by fat. Taxis under ether was ineffectual, and herniotomy was done. After three days strangulation the bowel was found deep red in color, but not brown, or black. It was returned after a very deep division of Gimbernat's ligament. She recovered without a bad symptom.

Case IV.—An elderly woman, the mother of a large family, had had a tumor in the right groin for two years. Ten days before I saw her she had experienced symptoms of strangulated hernia, as vomiting, colic and constipation. The abdomen became tense and tympanitic and tender; more tender than the tumor itself, which was small and did not increase. The symptoms were masked by opium. After six days, a second tumor appeared in the femoral region. The symptoms then ameliorated as to severity of pain and vomiting, but prostration continued.

Ten days after the first attack I saw her in consultation.

She was being held up in bed, and was retching and hiccoughing. The face was livid, and the whole cutaneous surface had that peculiar dusky capillary congestion, accompanied with a cool skin and clammy sweat, characteristic, in every case I have seen it, of intestinal obstruction. It is a deeper and more sluggish lividity than that of continued fever; and, excepting the moist skin, resembles the general aspect in cholera. The pulse was 108, and thready. She retained light food, and was kept somewhat under the influence of morphine.

The abdomen was moderately distended with flatus, and somewhat tender on pressure. The tenderness was most marked on the side opposite to the tumor. This fact, with the chronic state of the case and the appearance of a second tumor, had occasioned considerable doubt among her physicians. In the right groin was a flattened convex tumor, about two inches across, and occupying the site of femoral hernia. Below this was a dividing line of constriction; and immediately below, occupying the lower half of Scarpa's triangle, another swelling, a little larger than the upper one, rounded, flattened, reddened and œdematous. On percussion, both these tumors contained air. The second appeared about five days after the first one. At that date and since, the most urgent symptoms had become alleviated.

The *diagnosis* made was, strangulated femoral hernia, followed by rupture of a sloughy intestine, pouring the fæcal and gaseous contents into the sac, sloughing of the latter, and burrowing of a fæcal abscess down the thigh. It was obviously impossible that a femoral hernia could have descended so far down the thigh, without being arrested by the junction of the iliac and pubic portions of the fascia lata below the saphenous opening. It was not probable that we had to deal with a separate abscess below, since the lower tumor was tympanitic on percussion. The constriction was probably the falciform border of the saphenous opening.

Taxis was deemed inadmissible; immediate laying open of the two swellings with the knife, to be imperative. On the above diagnosis I proceeded to operate. The event justified the course pursued, and verified the diagnosis. On cutting down upon the upper tumor we found a sac, which on being opened gave exit to gas and fæces. Within the sac lay a large mass of sloughy omentum. The bowel was sloughed away. Liquid fæces poured from the crural opening. The second swelling communicated with the first. It was filled with broken down and shreddy muscular tissue, fæcal matter and gas. It ran down among the long muscles of the thigh. On turning the patient on her side, liquid fæces ran out of the crural opening, and filled a pail half full. The patient lived twelve hours.

Case V.—In September, 1869, a young man, 22 years old, robust and healthy, presented himself at my office. He came to consult me about a swelling in the left groin, which filled the scrotum, and did not return into the abdomen. Three years before, he had begun to notice and to be troubled by it. It had steadily enlarged, and now was the seat of occasional dragging pains, and prevented him from working. He had tried trusses and been unable to bear their pressure. They had always been applied over an unreduced tumor. I could not reduce the tumor, and I advised him to wear a suspensory bandage. He came to see me several times, and was desirous of some operation, if any could promise to relieve him. A tumor filled the scrotum on the left side. It had a large, broad neck, running up into the inguinal canal. The upper third of it could be returned into the abdomen. It communicated an impulse on coughing. It was dull on percussion. That part which remained in the scrotum was hard, inelastic, irregular and not very sensitive. It did not fluctuate. The surface of the skin was covered with large veins. The testicle could not be clearly made out.

The swelling did not transmit light through it. On returning the reducible portion the ring and canal were not left free and open.

My diagnosis was, probably an irreducible omental hernia, adherent to the sac, with a portion of bowel returnable above it; and perhaps other folds of intestine in the irreducible mass. He had never had strangulation, but occasionally colic. The possibilities were, hydrocele of the cord, hæmatocele or enlarged testis, besides hernia.

The patient, after returning several times not relieved, desired an operation to return, or get rid of the tumor, so that he could get his living. It was evident that the dependent mass was constantly dragging down more intestine from above, and dilating still more the inguinal canal. His pain and disability increased, and provided the tumor could be disposed of safely, it was plainly the course to pursue.

On the other hand, to cut down upon a doubtful swelling, and to lay open a hernial sac, break up adhesions, remove omentum, and return, or fail to return the uncovered bowel, was evidently a hazardous procedure. There was no strangulation; no immediate danger to life; and the symptoms were not urgent. Was an operation expedient, or justifiable?

The pros and cons were explained to the patient, and he was advised to enter the City Hospital, and abide by the result of a consultation of its surgeons. This he did; and their opinion mainly coincided with my own. Several, however, leaned to the belief that the hernia was all reducible, and that we should find below a hydrocele of the cord. The decision was left entirely with the patient himself. He concluded to take the risk, and was operated on the following day.

After returning the reducible portion, the scrotal swelling was cut down upon, and found to be wholly an irreducible omental hernia. The omentum was ligatured and cut off. The stump was left to plug the inguinal canal. He recovered without any abdominal symptoms. He had an attack of hæmorrhage from sloughing of the scrotum. When he was discharged from the Hospital the plug of omentum kept the hernia up. Within a few weeks it came down again, and he now wears a truss, and goes about with comfort.

Case VI.—A little boy of six years had congenital hernia and hydrocele. Direct communication existing with the abdomen, whenever the bowel was retained, fluid trickled down in the erect posture, and prevented the ring from tending to close. More than this, a variety of trusses had been tried for several years, and owing to the fluid and the activity of the child, the rupture could not be kept up. Colic and nausea troubled him occasionally. He was at just that age when nature does most to cure rupture; and it seemed probable that if allowed to go on, he would have a large, irreducible hernia.

The parents desiring an operation, it seemed to me a fair case for Wood's Radical Cure. If the operation failed to cure, it would certainly enable the bowel to be retained by a truss.

He was operated on with wire, by Mr. Wood's second method. He never had any abdominal symptoms, but passed through a mild attack of erysipelas, which was confined to the scrotum, buttocks and legs. He made a good recovery. Neither bowels nor fluid came down after the operation; and he now wears a light horse-shoe truss, with a fair prospect of permanent relief.

ON THE PREVENTION OF VENEREAL DISEASES.*

By W. F. Munroe, M.D., Boston.

One of the most curious anomalies in the social system of the Anglo-Saxon race is the position of prostitution and its attendant diseases. So well recognized as to be called the "social evil" *par excellence*, the whole question has until recently been persistently avoided by law-makers and sanitarians, while the evil, practically protected by prohibition, has gone on gaining strength and becoming more and more unmanageable and pernicious. This neglect is due undoubtedly to the natural antipathy felt for a disagreeable subject; to fear of opprobrium from associating one's name with the revolting details which must be entered into; and last, though not least, to the wide-spread ignorance as to the extent and influence of the evil. In this age, however, now that public attention is turned toward public hygiene, a strong reaction is taking place, and the question is at last beginning to receive some of the attention which it deserves. One of the earliest results of this awakening is seen in the passage of the "Contagious Diseases Act" in England, so long the stronghold of prejudice and disease, and another in the report before us. The importance attached to the subject by the Congress can be inferred from the excited debate which it gave rise to (see report by Dr. J. B. Upham, in this JOURNAL for August 20, 1868), from the appointment of the Committee by a unanimous vote, and from the character of the members of the Committee. It may be mentioned, in passing, that Drs. Crocq and Rollet, who were selected to draw up the report, were peculiarly fitted for the task, both as hygienists and syphilographers.

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* Prophylaxie Internationale des Maladies Veneriennes, par Messieurs Crocq (de Bruxelles) et Rollet (de Lyon). Rapport fait au nom de la Commission nommée par le Congrès Médical Internationale de Paris, de 1867.

Committee appointed by the Congress. *Foreign Members.*—Drs. De Meric of London, Hebra of Vienna, Seitz of Munich, Crocq of Brussells, Seco-Baldor of Madrid, Galligo of Florence, Palasciano of Naples, Owre of Christiana, Barbosa of Lisbon, Frerichs of Berlin, Hubbenet of Kiew, Fordyce Barker of New York, Wilson Jewell of Philadelphia, J. Baxter Upham of Boston, Hingston of Montreal, McIlvaine of Cincinnati.

French Members.—Drs. Behier, Bouillaud, Dechambre, Gosselin, Jaccoud, Jeannel, Mongeot, Ricord, Rollet, Tardieu, Verneuil.

Syphilis is a disease dangerous to all classes—virtuous as well as vicious, rich as well as poor. It may be communicated by knives, forks, spoons, drinking utensils, or any object which passes from mouth to mouth. This is illustrated by an epidemic which broke out in a large glass-blowing establishment in the south of France in 1858 (reported by Rollet, of Lyons), and infected the whole community to such an extent that the attention of government was called to it, and the passage of the same tube from one mouth to another forbidden by law. Impure vaccine matter may be the vehicle of contagion. A child may infect its nurse, or the nurse may infect the child. In fact, an infected individual is a source of danger to all about him —a danger much increased by frequent relapses of the disease and the general ignorance upon the subject. Even when external symptoms may be wanting in the father, he may beget an infected fœtus which in turn may infect the mother through the womb. In this case, either abortion results or the child comes into the world diseased. Supposing the fœtus or child to escape the specific contagion, the hereditary taint is shown in an increased tendency to constitutional diseases of various kinds. These results are shown in the gradual depopulation of some of the Pacific Islands since the introduction of syphilis by the marine of civilized nations. Thus, apart from the personal suffering of the vicious, venereal diseases are the insidious and persistent source of more ill to the world than the epidemics against which the whole machinery of government is put in motion.

The direct and indirect expenses accruing to the State and city from prostitution, with its concomitant crimes and diseases, are immense. Sanger (Hist. of Prost., p 605), by carefully made estimates, finds that ten per cent. of the police and judiciary expenses of New York city are due to these causes. Add to this their proportion of penitentiary, workhouse and hospital expenses, and we raise the sum to nearly seventeen per cent. of the entire municipal expenses. (This was in 1857.) In this calculation no account is taken of the outlay for private medical assistance, the value of time lost, &c.

Private interests also demand some remedy for the present state of affairs. "There is the money a working man must pay for his cure; this is his share of the loss. There is his unproductive time, and the loss of profits upon his labor; this is his employer's sacrifice. There is the deprivation of comforts and necessaries experienced by his family and dependents; this is their penalty. Society is thus involved in a general loss on account of an act of folly, or passion, or crime (call it which you will), committed in a concealed and secret haunt, and such loss could be saved by the intervention of proper means." (Sanger, op. cit., p. 24.) In the British Army, previous to 1866, when the Contagious Diseases Act was passed, there was an average annual loss of nearly nine days' duty to each man from venereal disease. Since the passage of the act, this proportion has much decreased in the twelve cities in which it is in operation.

After carefully considering the sad results of these wide-spread diseases, even the severest moralists can hardly deny that their ravages should be stopped or checked as much as possible. Can legal enactments accomplish either of these objects? "The policy of indifference and *laissez-faire* has had a full and fair trial, and in every respect it has been found wanting. In the number of the *Westminster Review* for July, 1869, we described its ill effects on the civil population of England, and showed that those effects have been, and still are, most disastrous." (*Westminster Review*, January, 1870.)

Prohibition is the first legal remedy which suggests itself; and, as this has been the policy of nearly every nation at times, we have abundant data from which to draw our conclusions. In Prussia, in particular, there have been several attempts at suppression, followed invariably by a return to police regulation. The results of the last attempt, in 1845, are instructive. "During the two years previous to the suppression, the number of men received at the hospital (for venereal disease) was 741 in 1844 and 711 in 1845." During the three succeeding years, the numbers were 817, 894 and 979. The females increased in about the same proportion, and their average sojourn in the hospital rose from 24½ to 32⅔ days; the average time which each man remained in the hospital rose from 37½ to 49⅓ days. (*Westminster Review*, Jan., 1870.) What better proof could we have of the increase in frequency and severity of the disease? In Rome, where the system of government is such that repressive measures can be fully enforced, there are no public houses of prostitution, but the laxity of principles among the people of all classes is perhaps greater than in any other European city. Stockholm, where there are no houses of prostitution, and where two which were established a few years ago were immediately torn down by a mob, is perhaps its strongest rival, showing that climate and temperament are not the causes which explain this. As Sanger (op. cit., p. 19) says:—"It is a mere absurdity to assert that prostitution can ever be eradicated. Strenuous and well-directed efforts for this purpose have been made at various times. The whole power of the Church where it possessed not merely a spiritual, but an actual secular arm, has been in vain directed against it. Nature defied the mandates of the clergy, and the threatened punishments of an after life were futile to deter men from seeking, and women from granting, sinful pleasures in this world. Monarchs, victorious in the field and unsurpassed in the council chamber, have bent all their energies of will, and brought all the aids of power to crush it out; but before these vice has not quailed. The guilty women have been banished, scourged, branded, executed; their partners have been subjected to the same punishment; held up to public opinion as immoral; denuded of their civil rights; have seen their offences visited upon their families; have been led to the stake, the gibbet, and the block, and still prostitution exists. The teachings of morality and virtue have been powerless here. In some cases they restrained individuals; upon the aggregate they are inoperative." Certainly it does seem clear that prohibition is not the agent by which prostitution is to be extinguished.

In this connection a most important question arises, as to whether the extinction of prostitution is really an object to be desired. Whether turning the stream of men's passions from the channels in which they now run, and compelling them to overflow into the domestic circles of society, would not be a still greater evil. "The essentially exclusive nature of marital affection, and the natural desire of every man to be certain of the paternity of the child he supports, render the incursions of irregular passions within the domestic circle a cause of extreme suffering. Yet it would appear as if the excessive force of these passions would render such incursions both frequent and inevitable.

"Under these circumstances there has arisen in society a figure which is certainly the most mournful, and, in some respects, the most awful, upon which the eye of the moralist can dwell. That unhappy being whose very name it is a shame to speak; who counterfeits with a cold heart the transports of affection, and submits herself as the passive instrument of lust; who is scorned and insulted as the vilest of her sex, and doomed, for the most part, to disease and abject wretchedness and an early death, appears in every age as the perpetual symbol of the degradation and sinfulness of man. Herself the supreme type of vice, she is ultimately the most efficient guardian of virtue. But for her the unchallenged purity of countless happy homes would be polluted, and not a few, who in the pride of their untempted chastity, think of her with an indignant shudder, would have known the agony of remorse and despair. On that one degraded and ignoble form are concentrated the passions which might have filled the world with shame. She remains while creeds and civilizations rise and fall, the eternal priestess of humanity, blasted for the sins of the people." (Lecky's History of European Morals, vol. ii. p. 299.)

The condition of Roman society, the licentiousness of Stockholm and the results of prohibition in Prussia, Bavaria, and all other countries where it has been tried, show not only the futility of repressive measures, but their positively bad effect in the increase of venereal disease and the demoralization of society.

In England and this country the policy is that of indifference. The Massachusetts Statutes place "common pipers and fiddlers, stubborn children, runaways, common drunkards, and common nightwalkers," in the same class, and inflict upon them the same punishment. Fornication is liable to imprisonment not exceeding three months, or a fine not exceeding thirty dollars. Keepers of houses of ill fame are liable to imprisonment not exceeding two years. Thus our treatment of the social evil, like that of the English, is theoretical prohibition but practical freedom, the effects of which may be seen from the statistics given in connection with the subject of regulation.

The limits of this article will not allow the citation at length of authorities, but it is an established fact that all sanitarians who have considered the subject, recognize its immense importance in its bearings upon public morals and public health, and agree in saying that a thorough ventilation and consideration of the question is required. Even those most opposed to licensing brothels, concur in this, that some remedy must be found, and that the extent and influence of the evil must be understood before any steps can be taken toward this. Even in England the question is being freely discussed, and has already given rise to several debates in parliament, as well as in many of the medical societies, and to several articles in the Westminster Review which I hope to examine in another paper.

After remarking that the extinction of venereal disease is not an Utopian idea, since it never arises except from direct contagion, the report recommends the periodical examination of women of the town, and strengthens its position by statistics showing the proportion of disease in countries where these are enforced, to disease in those where no provision is made. In the English army (prior to the Contagious Diseases Act) there was an annual average of 309 cases of venereal diseases to 1,000 men; in France, where the regulations are imperfect, 113; in Belgium, where they are more perfect, only 98. The effect of England in the dissemination of these diseases can be readily inferred. As the report says, "As long as prostitution is not regulated in England and the United States, so long are projects for the prevention of venereal diseases radically imperfect, since they lack that international character which can alone render them efficacious" (p. 13). The committee also make the obvious remark that "the future of the Anglo-Saxon race is at stake; it cannot be in vain that venereal diseases infect English blood with their principle of degeneracy to twice, thrice and four times the extent to which they infect that of other nations. However well favored by nature the race may be, it cannot long preserve from this contamination the native vigor of which it is so proud, nor even its moral energy." (P. 17.) The Contagious Diseases Act (see p. 7) is approvingly referred to as a first step, but its general application to the civil population advised. This is also advocated by the Harveian Society of London (composed of many of the leading physicians in England). In the question of international prophylaxis, the part of the United States is perhaps less important than that of England, with its numerous colonies and stations. Still it is important, and it is satisfactory to find that the belief in the expediency of regulation is rapidly gaining ground among the medical profession here.

General Regulations of Prostitutes.

After alluding to the comparatively recent attempts at suppression in Spain, Italy and Prussia, an account is given of the stringent prohibitory law now in operation in Bavaria. This went into effect in 1861, when there were but a few public houses of prostitution in the city, and these well under police supervision. By the new law, however, any one furnishing a house for the purpose, as well as all women guilty of prostitution, are punished by imprisonment for a term not less than one month nor more than one year. "In this manner the public houses were soon closed, but the moral and physical condition of the people is far from having gained by it. Prostitution has not decreased; it simply conceals itself, and the more effectually it conceals itself the more damage it does. Medical visits to the women have been done away with, but the number of patients in the hospital affected with venereal disease has doubled in five years." Even in France and Belgium prostitution is not regulated by the general government, only by the municipal police, and a change is strongly recommended by the Committee. To make any measure efficient, unity of action is required. "Prostitutes are as cosmopolitan as the corruption in which they originate. Hygienic and other regulations proper to prostitution are equally necessary and should be similar in all localities." "It is the unanimous opinion of our colleagues that every efficient system of prevention should look particularly toward limiting the number of free prostitutes, and thus obviating the dangers of clandestine prostitution. Where dispensaries for the compulsory examination of women are established nearly the entire danger to the public health is due to clandestine prostitution." "In cities in which this sanitary service is well organized, the proportion of diseased prostitutes (subject to the regulations) does not exceed 2¼ per cent. On the contrary, in the raids occasionally made by the police upon the free prostitutes the proportion is vastly greater" (averaging at least 50 per cent.).

From what has been said it is easily understood that, in order to get at the real source of venereal infection, the nearest possible suppression of clandestine prostitution is necessary. "Your Committee, in accord with the Medical Congress, and we can say in accord with nearly the entire body of medical men, cannot insist too strongly upon this point."

"This suppression can be obtained only by a department of public morals (bureau des mœurs), composed of a sufficient number of experienced agents, and having at their head an intelligent and thoroughly honest chief. To this department must be entrusted the mission of seeking out clandestine prostitution. It must pursue it without flagging, and strive to reach it under all disguises. But, in the hierarchy of vice there are many degrees." At what point should the police intervene? This is a delicate point, which should be left in the first place to the head of the department. It is he who is to decide upon the lot of clandestine prostitutes by the propositions which he submits to superior authority. Such functions are responsible ones, and the committee think that a species of magistracy should be created for them.

Examination of Men.

Society has long looked to women as the sole source of venereal infection, neglecting entirely any sanitary precautions as relating to men. One of the most active sources of infection is in the army and navy, the organization of which makes the application of sanitary measures peculiarly easy. The merchant marine also has a large share in the propagation of venereal diseases, as shown in the gradual depopulation of so many of the Pacific islands already referred to. In fact, war and commerce have been the means of spreading the disease over the world. Columbus (according to many authorities) carried syphilis to Europe from America. The Italian expedition of Charles VIII. diffused it through Italy, and the general war resulting from this expedition spread it over the whole continent. Africa, India and Japan are supposed to have received the syphilis from the Portuguese marine; Norway from its commercial relations with Holland; Scotland from Cromwell's army. In fact, the history of the spread of syphilis is a part of the history of all the great expeditions since the fifteenth century. The statistics of the English Navy from 1860–67 show an annual average of 64 cases of syphilis per 1000 men, and 85 of venereal diseases of all kinds. The cases of syphilis in these seven years increased from 50 to 71 per 1000 men. These figures make it easy to understand the influence which the navy can have in disseminating disease, and the injustice which may be done those places where disease has been kept at a low rate by sanitary precautions. At Bastia the rate of venereal disease in the hospital was raised from 6 to 15 per cent in one year by the arrival of one foreign regiment. "In the army and navy two classes of visits are required, *i. e.*, those at regular intervals, and those under certain specified circumstances, at the time of joining or returning to the regiment, leaving on furlough, changing garrison, embarkation and debarkation." These visits are enforced to a certain extent in the French army and navy, but more thoroughly in Belgium, and their results can be seen in the statistics already given on page 13. Only a small part of the population, however, receive the benefit of these visits, and the prevailing opinion of the International Congress is that these provisions should be extended to the merchant marine. As far as the seamen are concerned, this would not be difficult, but the principal obstacles would be offered by the desire of captains and shipping masters to get men, no matter what their condition might be, at times when sailors are scarce. Even the existing quarantine laws, mild as they are, are not supported without impatience. These objections the Medical Congress does not pretend to answer, but would refer them to an International Commission, officially appointed to confer upon the prophylaxis of syphilis.

Hospital Accommodation. Public Aid. Mutual Aid.

Throughout the civilized world the hostal accommodations for this class of diseases are notoriously insufficient. In fact, such cases are turned away from many of the public institutions. In the London hospitals there are not more than 250 beds for sufferers of both sexes from venereal diseases, while the Harveian Society estimates the number required at not less than 1500. In France even, there is nearly the same lack of accommodations. Thus, instead of the sequestration so imperatively demanded by a regard for public health, the infected are denied even an asylum.

When the local authorities alone make the necessary sanitary rules, they are as a matter of course taxed with the results of their neighbors' negligence. Consequently it is the duty of the State to assume the control. As to the treatment of sailors in seaport towns, some arrangement should be made by the different nationalities in regard to the expenses, &c. Mutual aid societies should allow assistance to members disabled by venereal diseases as well as to those disabled by other causes.

The danger of infection by vaccination (when blood is mixed with the lymph), that from circumcision where suction by the mouth is practised, that to glass-blowers where the tube is passed from mouth to mouth, that from the common use of ordinary household utensils, are dwelt upon; also the obvious precautions to take.

Some medico-legal authorities have advised a law forbidding the marriage of any one once affected by syphilis. This the Committee oppose on the ground of its impracticability. Instructions should be given the public by which the forms of syphilis could be understood and the dangers avoided as much as possible, on the same principle as the instructions given the people (in France) in regard to typhus fever, cholera, &c.

"All disguises and false modesty must be ignored. It is absolutely necessary that the people should understand these diseases; in the first place because danger understood is more easily avoided, and in the second place because the governments need the aid of public opinion in this campaign against syphilis, where there are not only so many evils to combat, but so many prejudices to overcome."

Syphilization, as a prophylactic, is reported against.

The report concludes by saying that it is the duty of the French government to convoke an international commission to consider the question of international prophylaxis.

NOTE.

"Public opinion in Great Britain and Ireland is rapidly coinciding with the views of those sanitarians who are advocating legislative means for the purpose of arresting the spread of contagious venereal diseases. A few years ago, he who would venture to suggest desirability of State interference in such a matter would have been scouted by the non-medical section of the community; but the enormous physical evils which result from untrammelled prostitution are now so potent that all save the most prejudiced admit that they demand a prompt remedy. If the non-recognition of this 'social evil' could tend in any way to lessen the vice, there would be some excuse for those whose over-prudishness leads them to object to any interference on the part of the State. But the history of all nations shows that both the moral and physical evils arising from prostitution have been increased instead of lessened by allowing the unhappy creatures to remain free from the surveillance of the authorities. Efforts have been made from time to time in most civilized countries to eradicate prostitution, but not only did these attempts prove failures, but they actually, in many instances, induced a general corruption of morals. In the year 1845 all the brothels in Berlin and others of the large Prussian towns were forcibly closed by order of the king, and public prostitution was proscribed under severe penalties throughout the kingdom. Very soon the results of this system became apparent. Illegal prostitution rapidly spread. The public morals became worse than ever. The number of illegitimate children increased. There appeared to be a general profligacy pervading all ranks of society, and finally venereal disease became more virulent and widespread. After six years' experience of this method of stamping out prostitution, the king was prevailed upon to repeal his edict and to allow the re-establishment of brothels under surveillance of the authorities." (Half-yearly Report on Public Health, by Charles A. Cameron, M.D., Professor of Hygiene and Political Medicine, Royal College of Surgeons, &c. &c. Dublin Quarterly Journal of Medical Science, Nov., 1869.)

BILLROTHS CASE OF DEATH FROM CHLOROFORM.

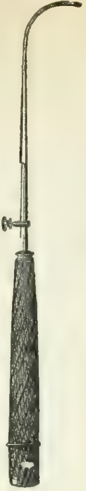
Translated for the Journal by M.D.

A SERVANT girl, 24 years old, was sick with acute articular rheumatism, from Oct. 11th, 1869, till Jan. 30th, 1870, in the Vienna Hospital, under Primarius Dr. Scholz. Oct. 15th, 1869, abnormal heart sounds were heard, which disappeared, so that Nov. 18th, 1869, she was chloroformed in order to have the right knee straightened, which operation was easily performed. The diseased process ceased, but the right knee and right ankle remained stiff, immovable. For further surgical treatment she was transferred to Hofrath Billroth's clinic. After convalescence was fully established, and after repeated examination of the heart failed to show *any symptoms of heart disease*, the attempt was made to restore motion to the stiffened limb. The patient submitted to this operation on the 23d of February, 1870, all the more quietly as her next bed neighbor had passed through the same with success, and there was no fear of the results of the anæsthetic, since she had previously been chloroformed. The patient lay horizontally on her back on the operating table. The chloroformization proceeded unusually quietly. As soon as insensibility was attained, the attempt to move the knee was commenced; this was scarcely half accomplished when the sudden cessation of the pulse was announced by the very trustworthy assistant, and at the same time the respiration became irregular; some seconds elapsed before the chloroform was removed, and, naturally, it was not used again. By means of artificial respiration through a catheter in the larynx the patient was brought to herself so as to breathe again quietly and regularly. Hofrath Billroth turned his attention to continuing the operation, when the respiration again became irregular. Immediately, after having quickly performed tracheotomy, artificial respiration was again made, then also by means of electricity motion of the diaphragm was kept up regularly; as the patient until about twenty minutes after the beginning of the asphyxia from time to time made spontaneous efforts to breathe, these efforts were continued nearly an hour. Yet neither by venesection at the elbow, nor by opening of the radial artery, came any blood. Also finally acupuncture of the heart had no effect. "It is indeed not to be doubted that the cause of death was a sudden cessation of the heart's motion, and that this was caused by changes in the muscular substance of the heart, by which means such cases of sudden death occur repeatedly without chloroformization. Alas! seldom is it possible to diagnosticate myocarditis with certainty. Irregularity of the pulse was not present in this case, the pulse was full and regular; and, in short, neither from the previous nor the present condition could a contraindication be found for a chloroformization conducted with proper foresight." At the autopsy, thickening of the edge of the bicuspid valve with small papillary excrescences was found; the heart's substance was yellowish brown, friable.—*Algem. Med. Centralzeitung*, March 2d, 1870, from the *Wiener Med. Wochenschrift*, Feb. 26th, 1870.

NEW STAPHYLORAPHIC NEEDLE.

By J. T. Mathis, A.M., M.D., Ophthalmic and Aural Surgeon, Vincennes, Ind.

In the operation for the relief of cleft palate, the most difficult step is placing the suture *in situ*, and perhaps there is no step, of equal magnitude, in the whole circle of Surgery, for the performance of which surgeons have more heavily taxed their ingenuity in the effort to adapt the instrument to the operation. Without penning the long list of surgeons who have figured upon the arena, without attempting to portray the comparative merits of their several inventions and appliances, I proceed immediately to the description of the Needle under consideration and the manner of its use. (The cut is half length).



It is a curved canulated Needle, as represented in the figure, the curve being an arc of 70°, whose radius is ¾ of an inch.

The point and edges of the Needle are formed by a bevel* at the expense of the concavity of the curve. Through the canula passes a fine steel spring, whose proximal end is fastened, by means of a thumb screw, to a slide which moves upon the uncanulated portion of the Needle, which extends from the proximal end of the canula to the distal end of the handle.

The distal end of the spring, corresponding with the point of the Needle, terminates in a small hook, which rests in a little receptacle in the end of the canula, except when it is protruded for the purpose of receiving the suture.

The mode of using the Needle is very simple. Having pared the edges of the fissure in the usual manner, and the muscles of the pharynx having been treated as the surgeon may desire, he is to take the following very simple steps:

1st. Commencing at the top of the fissure, and on the left side, pass the needle through the lip of the fissure from before backward.

2d. With the thumb upon the slide, protrude the spring, which re-curves and passes forward through the fissure, and exposes the little hook on its end to the plain view of the surgeon.

3d. Arm the hook by means of a loop formed at the end of the suture (silk) taken in a pair of forceps, and then thrown over the hook on the end of the spring.

4th. By means of the slide, retract the hook holding the loop of suture, to its position in the little receptacle in the end of the canula.

5th. Withdraw the Needle from the palate and from the mouth, and leave both ends of the suture hanging out of the mouth.

The deposition of the suture on the left side is now complete.

The steps for the right side are the same as for the left, using the precaution not to form the loop on the same end of the suture for both sides of the fissure.

It will readily be seen by the surgeon

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* The engraver has failed to represent the point.

who has closely studied the operation, that the main advantage gained by the Needle here presented is the much easier location of the suture in the second lip of the fissure, at the same time preserving the same level for both ends of the suture, because the Needle is passed from before backward, giving the surgeon an opportunity to see the exact position of the point as it enters the palate. This can be done with no Needle which is armed before its introduction (I mean without twisting the lip of the fissure out of its natural position).

After having placed the several sutures *in situ*, if the surgeon prefer the silver suture before the silk and perforated shot, he can, with a loop on the end of the silver wire, attached to the silk, draw it through, and thereby substitute the silver for the silk.

This Needle will also act well in operating for vesico-vaginal fistula, or almost any operation in which the suture is to be deposited in a cavity, at a remove from the hand of the surgeon; but it is best adapted to those operations in which the parts receiving the sutures are situated in such cavity, and at the same time perpendicular to the line of the surgeon's vision and operation.

The Needle which I now have, and the only one of the kind in existence, as far as I know, was made in the spring of 1867, by George Tiemann & Co., No. 67 Chatham street, New York City. Almost ever since that time, Mr. F. A. Stohlmann, of that firm, has been trying to induce me to bring it before the Medical and Surgical profession; but hoping to be able to modify and more extensively utilize the instrument, I have postponed its general publication until the present.

VERMONT MEDICAL SOCIETY.

Editor Medical and Surgical Journal:—

PERHAPS it may interest the numerous readers of your Journal in Vermont, to learn that the semi-annual meeting of the Vermont State Medical Society will be held at the city of Burlington on Tuesday and Wednesday, June 7th and 8th prox., commencing at 11, A.M., on Tuesday, and closing at 4, P.M., on Wednesday. The programme of the exercises is as follows: *New Remedies*, Dr. L. C. Butler, of Essex; *Anæsthetics in Midwifery*, Dr. O. F. Fassett, of St. Albans; *Imperfections in present system of Medical Education*, Dr. C. S. Allen, of Rutland; *Uses and Abuses of Opium*, Dr. C. P. Frost, of Brattleboro'; *The Thermometer in Medical Practice*, Dr. G. B. Bullard, of St. Johnsbury; *Pathology of Fever*, Dr. E. E. Phelps, of Windsor. Besides these papers, there will be reports of Cases in practice; a statistical dissertation on *Consumption in Vermont*, by Dr. Butler, and in the evening of Tuesday an address by Dr Abram Harding, of South Hero, Vice President of the Society, on *Improvements and Changes in the Science and Practice of Medicine.*

To such a "feast of fat things" the officers of the Society invite the medical fraternity of Vermont, and the delegates from other State societies. We hope they will respond in such numbers as to show that they not only have a deep interest in the State Society, but also in the progress of medical science, and in the elevation of the standard of medical education.

Yours, &c., L. C. BUTLER, *Secretary.*
Essex, Vt., May, 1870.

Bibliographical Notices.

The Physiology and Pathology of the Sympathetic or Ganglionic Nervous System. By ROBERT T. EDES, M.D. An Essay to which the O'Reilly Prize was awarded by the New York Academy of Medicine, May 5th, 1869. Printed for the Academy. New York: William Wood & Co. 1869. Pp. 152.

THOUGH much has been done during the last twenty years in this branch of medical science, the results obtained lay scattered in medical and scientific journals and in records of scientific societies. Dr. Edes has done good service in briefly narrating the results obtained, and placing the knowledge gained by English, French, German and American investigators within the reach of all. It is possible to see what has been done, and also to realize how much more remains to be accomplished.

No attempt has been made at historical completeness; the author only claims to have arranged systematically what is already known. It would then hardly be just to criticize the historical portion, and after briefly mentioning some of the more important facts in the physiology of the sympathetic, we will briefly allude to one or two points in which the author's conclusions seem somewhat defective.

Certain sensations are conveyed by the sympathetic, and irritation of its branches or ganglia produces pain, but the amount of the sensibility to pain varies in different animals, and in none is it so great as in the cerebro-spinal system.

The first and most obvious effects of division of the sympathetic in the neck, or removal of the superior cervical ganglion, "are—a contraction of the pupil on the operated side, partial closure of eyelids, a projection of third eyelid, and sinking of eyeball deeper into the socket, with increased heat and vascularity of corresponding side of head."

Galvanization of the upper extremity of the nerve has the opposite effect.

"The centre, whence the excitations proceed, which traverse the sympathetic and induce dilatation of the pupil, is situated in the spinal cord, as shown by Budge and Waller, who still further localized this centre between the sixth cervical and fourth dorsal vertebræ. This region has received the name 'cilio-spinal.'" Brown-Séquard, however, considers that the limits are wider, as low as the fifth or sixth dorsal, and as high, probably, as the medulla oblongata.

"The next noticeable phenomenon, after the section of the cervical sympathetic, is an increase of heat on the corresponding side of the head; and this is seen to be coincident with increased vascularity." Dr. Edes recognizes the chemico-vital changes taking place in the body as the source of heat, but he thinks the local increase of temperature after section of the sympathetic is due to an increase in the rapidity of the flow of blood through the parts rather than to any increased metamorphosis, for the heat is probably never higher than that of the interior of the body, and there is no marked change in the nutrition of the parts.

This increase of heat is taken as a guide and proof in determining whether there is paralysis of the sympathetic in other parts of the body.

Galvanizing the cranial end of the sympathetic after section produces contraction of the bloodvessels, consequently diminished vascularity and a fall of temperature.

Similar changes in temperature may be produced by operating on the spinal cord.

"Paralysis of the arterial coats—that is, paralysis of the vaso-motor nerves—increases rather than diminishes the pulsatile character of the flow of the blood. It is well known that the arteries on the side where the sympathetic has been cut pulsate more strongly than on the other."

The following paragraph is worthy of notice from the bearing it has on the diagnosis and treatment of a number of morbid conditions. "Four ways may be distinguished in which vascular dilatation takes place besides section of vaso-motor nerves. The first is dilatation after previous contraction; the second is primary, from direct irritation; the third depends on irritation of a motor, and the fourth on irritation of a sensitive cerebro-spinal nerve."

"It is probable that the relation between the sensitive, motor, and vaso-motor nerves is essentially a much more constant one than at first appears, that is, there is some one law which regulates all the vaso-motor reflex movements, whether of dilatation or contraction. What the law is, however, it is as yet impossible to determine."

"It seems as if there were a collateral vaso-motor supply, after section of a nerve trunk, not unlike the collateral circulation after ligature of an artery."

The effect of irritation of the sympathetic is to accelerate the beats of the heart, especially if the irritation is applied to the superior thoracic ganglion, and through this and the lower cervical most of the normal propulsive force reaches the heart from the spinal cord. E. and M. Cyon have found that the course of this influence is through the third branch of the inferior cervical ganglion in the rabbit, and the second branch of the same ganglion in the dog. They call these the accelerator nerves.

A slight irritation of the vagus accelerates the heart, a moderate or strong irritation diminishes the number of pulsations or completely stops the heart.

"The portion of the vagus which produces these effects has been found to be that portion of the internal branch of spinal accessory which arises from medulla oblongata." There are also ganglia in the substance of the cardiac walls which probably have an influence over its action.

The truth in regard to the action of the sympathetic and the vagus on each other and on the heart is probably not yet perfectly known, and there are many conflicting views, all founded upon experiment. Dr. Edes adopts the explanation given by von Bezold.

The influence of the sympathetic on the secretions is illustrated by its influence on the secretion of the submaxillary gland. The following are the principal conclusions: The glands do not obtain their secretory power from the nerves; they continue to secrete after all nervous connection is severed. Besides this power of acting independently, the glands are under the influence of the nervous system, through which their secretions are either increased or diminished. This increase is exerted by the sympathetic through the circulation, and the nerves are supposed to act also directly on the secreting cells. The action of the sympathetic tends to diminish secretion by contracting the vessels.

The following sentence in the eighth section is important as furnishing a possible explanation of many morbid processes. "The hypertrophy which results from section of nerves is very limited in amount, and confined almost entirely to epidermoidal tissues, producing a roughness of skin and curvature of nails." "A general hypertrophy has never been observed."

The author considers the existence of "trophic" nerves not proven.

The splanchnics when excited cause peristalic action of the intestines, not however of the whole, but sometimes of one part and sometimes of another.

The second part of the essay is devoted to the pathology of the sympathetic. The same order is followed in this as in the former part. The sections are headed :—1st, Neuralgia; 2d, Iris, Progressive Locomotor Ataxy; 3d, Temperature; 4th, Heart; 5th, Secretion—Diabetes, &c. This division seems to be less convenient for reference than one in which the different diseases were considered separately, especially as there is no index. The advantage is that the divisions correspond with those of the physiology in the first part.

The disease known as progressive locomotor ataxy is considered as probably not essentially an affection of the sympathetic.

Lesions of the sympathetic in the neck, by pressure or otherwise, produce the occulo-pupillary and thermic effects usual after section of the sympathetic.

The subject of heat and sweating lead naturally to the consideration of fever. In fever the rise of heat is as much or more a chemical phenomena than even a vaso-motor one.

The following statement is made in connection with fever and sweating. "It seems very probable that different sets of nerve fibres control the circulation in the papillæ near the surface, which give heat and color, and in the coils of the perspiratory glands which produce the secretion." In fever without sweating the first set alone are implicated. In febrile affections, with sweating, both sets are implicated.

Under nutrition the author endeavors to distinguish between the effects of paralysis and those of irritation; this is of course in many cases difficult, and he recognizes the difficulty.

The following two paragraphs on page 121 are of interest in connection with bed sores, &c. :—

"The foregoing considerations show that neither pressure nor loss of nervous influence can be regarded as alone the cause of sloughing in paralysis.

"Lesions of nutrition, as a consequence of irritation, are, however, if the explanations heretofore adopted in this essay are correct, much more varied than those following paralysis."

Many examples are referred to in connection with this subject, but as the question is one bearing on the great question of nutrition, it would have been more satisfactory if more details had been given. It is tantalizing to have a case merely referred to, when the original is beyond reach.

The following in regard to the cause of exophthalmic goitre is one of the clearest and most satisfactory explanations we have seen; yet this is not entirely satisfactory.

"Exophthalmic goitre, accompanied by palpitation, which is increased in paroxysms, is a disease beginning by irritation, congestion, or chronic inflammation of the lower cervical ganglia of the sympathetic, giving rise at first to increased action of the heart.

"The irritation or inflammation gives rise to hypertrophy of interstitial connective tissue of the ganglia, and consequent atrophy of part of the nervous element, with irritation of another part. Coincidently with, as sometimes happens, or subsequently, as is more usual, to the stimulation of the heart, occurs a subparalysis of portions of the vaso-motor fibres; hence congestion, followed by hypertrophy of the orbital connective tissue and of the thyroid gland."

The treatise is a full and fair explanation of what is known with the most certainty in regard to the sympathetic nervous system; the author has done well in bringing these facts together for the profession, and we trust the book will have a wide circulation. We know of no other in English which goes over the same ground. Since the award of the prize to Dr. Edes most of the same subject has been very thoroughly treated in the German journal, Archiv für Psychiatrie.

The author's statements are generally concise and dogmatic; perhaps if the quotations had been fuller, some of the conclusions would have been more convincing.

The whole subject of nutrition is one of the least satisfactory, probably because so little known. The effect of lesion of the solar plexus and splanchnics in increasing the intestinal secretions is but hinted at.

Is not the chill introductory of febrile diseases something more than a mere vaso-motor paralysis? The temperature in many cases of chill is much higher than the normal; Dr. Edes's statement would rather convey the idea that it is always lowered. This seems to us too absolute; we think it is generally raised. The most characteristic type of chill followed by fever is in intermittent fever. Here the chill is even preceded by an elevation of temperature, which continues during the chill and reaches its height during the subsequent fever and falls during the sweating stage; or the maximum temperature may be attained during the chill. See Jacoud's Clinique.

Dr. Edes's statement is, "The initiatory chill of intermittent fever, as well as of other diseases, is coincident with an irritation of the cutaneous vaso-motor nerves.

"After this stage comes relaxation of vessels, increased afflux of blood, heat and redness of skin, and throbbing of arteries. The third stage consists in somewhat diminished activity of the circulation and free secretion."

Under Exophthalmic Goitre as quoted above, the influence of hypertrophy of connective tissue in producing atrophy of nerve fibres seems to be acknowledged, and on page 118 he says:

"The hypertrophy of connective tissue which follows many congestions, also follows those which arise from vaso-motor paralysis. It is seen principally in the orbit of the eye, and in the thyroid gland, forming important symptoms in exophthalmic goitre, or Basedow's disease."

Why may not this reasoning be applied also to locomotor ataxy, and a connection be traced between congestion of the cord from functional derangement of the sympathetic and the hypertrophy of interstitial tissue which produces atrophy of the nerve fibres of the posterior columns, and hence locomotor ataxy? S. G. W.

Medical and Surgical Journal.

Boston: Thursday, May 19, 1870.

THE RECENT MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The Report of that meeting in the Journal of last week speaks for itself. The scenes described as occurring there rival some of those at the late International Medical Congress at Paris. Would that the results of the former had been as negative as those of the latter! Our trans-Atlantic *confrères* will, we fear, now have a lower opinion of the Profession in the United States than it properly deserves. We would put it on record, however, that very many of the really representative men among us were not represented there.

The vague resolution passed at the close of the session has little meaning in view of what had gone before. The doings and discussions of the convention, together with the rejection of Dr. Sullivan's clearly stated resolution, tells the story. *Caste* is inaugurated in the American Medical Association.

The convention, says the *Washington Chronicle*, "laid this resolution [Dr. Sullivan's] on the table by a large majority. The convention by that vote distinctly declared that *race or color should exclude persons from the Association.* They may be regularly educated physicians in good standing, but their color will cut them off!

"The doctors, immediately after this distinct declaration, stultified themselves and falsified the record of their proceedings by resolving that 'the consideration of race or color has had nothing to do with the decision of the question,' and then in the same breath they contradicted themselves by falsely asserting that the majority report was adopted by the convention. It may be safely affirmed that no company of men outside of Bedlam ever made such a jumble of absurdity and perversity in so short a time. No prudent man would consider it safe to submit himself in sickness to the treatment of doctors possessed of such confusion of ideas, to say nothing of their bad manners, perverse politics, and absurd prejudice."

With regard to the remarkable reception bestowed upon the delegates of the Massachusetts Medical Society at the recent meeting of the American Medical Association, we have but one word to say. The allegation that that reception was instigated by two Fellows of our Society stands out in bold relief. Whether the

Massachusetts Medical Society will condescend to apologize for its position with regard to any of its members who may have chosen to walk in the paths of pseudo-science, or shall decide to *expel the Association*, remains to be seen. The Society is competent to maintain its own dignity; and its course needs not to be forestalled by any further remarks in these pages.

DR. ANDREWS ON "THE RELATIVE DANGERS OF ANÆSTHESIA BY CHLOROFORM AND ETHER."

Since 1861 the "Report of the Boston Society" has been repeatedly quoted as authority for the statement that there is no recorded case of death fairly attributable to sulphuric ether. So far as is known in this city nothing has as yet occurred to falsify the above conclusion. We reiterate the assertion, because in an article by Dr. E. Andrews, of Chicago, on "The Relative Dangers of Anæsthesia by Chloroform and Ether, from statistics of 209,893 cases," which paper has been somewhat widely distributed, it is alleged that four (4) deaths have occurred from the inhalation of ether in 92,815 instances of its use. (There having been forty-three (43) deaths in 117,078 collected instances of inhalation of chloroform, Dr. Andrews says "it is evident therefore that the ratio of mortality in surgical anæsthesia, by chloroform, is about eight and a half times greater than by ether.")

The cases, on which this allegation of fatality by ether is founded, are given in the article alluded to, which was originally published in the *Chicago Medical Examiner* for May, 1870.

These cases are derived from a report of the officers of the New York Hospital (one case); from the well known Gayet series (two cases); and from St. Thomas's Hospital, London (one case). They are as follows, viz.:

"One case of death," says Dr. Andrews, "is reported to me verbally by the officers of St. Thomas's Hospital, London. I could not learn the particulars." This meagre account ought not certainly to carry any weight, or without additional evidence to pass as confirmatory of the dangers of sulphuric ether inhalation. It may therefore be set aside as entirely inconclusive.

Two cases are quoted from the report of M. Gayet. One which has often been discussed, and which is known as the "Antiquaille case," is that of a woman etherized for the removal of vegetations from the vulva. Dr. Andrews's report is as follows: "After a time the pulse was found very feeble and the operation was abandoned. Efforts to restore her failed, and she died. The surgeon of the Hospital considered it a case of death from ether. The autopsy disclosed no cause of death." Dr. Andrews cannot have been aware that this woman died after having been twenty-five (25) minutes under ether. Not that there is any danger in keeping a patient etherized for that length of time: but, if the operation lasted so long, it must have been a serious one. The "efforts to restore her" included the administration of some "soupe" *which the patient took*, and M. Gayet takes pains in his report to show that in this instance the ether might be exculpated.

The other Lyons case is that of a patient with a cancer of the superior maxilla. "The patient was pale, thin, and cachectic. She was carefully and successfully etherized; but in the early stages of the operation, before the bone was touched she ceased to breathe, and died apparently of syncope. It should be mentioned that the operation was in the sitting posture, a most dangerous position. But little blood was lost, however, and I [says Dr. Andrews] incline to attribute the syncope to the anæsthetics and therefore rank it as a death from ether."

We desire to present the following further particulars of which we are informed with regard to this case, and which Dr. Andrews seems not to have been aware of. The woman was 55 years old; the operation was "excision of the superior maxilla"; the ether was given from a sponge, placed in a bladder; only one ounce was used; and the question of death from hæmorrhage was entertained by some of the witnesses. When M. Gayet presented his report to the Lyons Medical Society, it was voted, "that after having analyzed completely the facts of the fatal cases, which public discussion should elicit, the

Society should declare by a vote in each particular case the share which ether had in causing the fatal result." Dr. Andrews probably does not know that in this case the vote of the Society was that ether was only in part responsible for the death (*l'éther n'a joué qu'un rôle sécondaire*).

The remaining fatal case in Dr. Andrews's necrology is that which occurred in the New York Hospital. He says it is "precisely like" the one just given, viz., an excision of the superior maxilla for cancer under the canthus of the eye, which also seemed to occupy the cavities of the maxilla. It occurred in 1865. "Early in the operation respiration ceased, and the patient died in spite of all efforts at resuscitation. There was no autopsy." The guilt of the anæsthetic may certainly be assumed as not proven in this instance. A surgeon of Dr. Andrews's experience must, we presume, admit the probable "*rôle sécondaire*" of ether in an excision of the superior maxilla. For we have surgical authority for the statement that the most rapid tracheotomy is often barely sufficient to snatch the subject, even in the early stages of the procedure, from impending suffocation. We are told, indeed, that some operators think that the opening of the trachea should, as a precautionary measure, precede any attempt to excise the upper jaw; so great do they consider the danger from blood unavoidably entering the throat. In this the fourth and last of the fatal catastrophes, it may be doubted whether the result was more than partially influenced by the inhalation of sulphuric ether.

Dr. Andrews's paper offers no comfort to the partizans of chloroform, even if we concurred in the conclusions he draws from his data. And as we look at his facts they do not invalidate the declaration of the Boston Society for Medical Improvement.

To the Editor of the Boston Medical and Surgical Journal:

The accusations brought against me by Wm. A. Hammond, M.D., editor of the *Journal of Psychological Medicine*, published in April, No. 21, require some explanation, and you will oblige me by giving it publicity.

1st, I am not nor never was a subscriber to said Journal, neither am I acquainted with its editor.

2d, I never wrote or asked Dr. Hammond to publish an article entitled "Physical and Moral Transmissions from Parents to Children," sent to the publishers for Appleton's Journal.

3d, Dr. Hammond did not ask my consent to publish it, neither did I give it to him.

4th, Dr. Hammond received said article from the office of the New York *Medical Journal*, where it was sent without my knowledge; after making alterations and corrections with additions and subtractions, he placed it amongst "Original Communications."

5th, Dr. Hammond accuses me of having perpetrated a fraud upon *him* and the publishers, but in justice to me, he must prove it by my letters.

6th, The undersigned wrote to the publishers, when he offered the manuscript for a compensation, that it was a translation for *Appleton's Journal*; but Professor Hammond made the mistake in considering the article as original, and after publication his error was pointed out to him from Cincinnati; then he immediately throws the responsibility upon

E. P. LeProhon, M.D.

Portland, April, 1870.

SUDDEN DEATH—POST-PARTUM.

West Eau Claire, Wis., April 14, 1870.

Messrs. Editors,—Dr. Cotting's case of sudden death near the close of pregnancy leads me to forward you the following. The physician addressed is brother of the husband of the deceased. The letter will explain itself.

West Eau Claire, Wis., Nov. 22, 1869.

Dear Doctor,—By request of your brother I am induced to give you some account of the circumstances connected with the sickness and death of his wife, which took place this morning.

I labor under great disadvantages in attempting this account, since I have not seen her for more than a year, till the present sad event transpired. I was called in attendance on the evening of the 21st.

Immediately on my arrival at the house, I ascertained by the nurse and a digital examination, that the membanes were ruptured. I also found the labor advanced, the head presenting in natural position, bearing upon the perinæum. The pains were moderate and regular; the parts lax and dilating; the surface cool.

On entering the room I was seriously impressed with the great pallor of her countenance, the transparency of her ears and skin, and the puffy condition of her eye-lids and face.

A glance at the patient was sufficient to put me on my guard. I feared serious mischief somewhere—most likely hæmorrhage.

But my immediate examination revealed no hæmorrhage, and a promising result so far as labor was concerned. In an hour after my attendance the child was born, and within fifteen minutes the secundinæ were expelled, assisted only by slight traction of the cord.

Thus far the process of labor was perfectly natural and easy—more than usually so.

The confinement, however, was premature by a month or more—appearances justified the reckoning of the mother. The child was thin, exhibiting deficiency of nutrition. It was feeble, and with much difficulty I was enabled to excite and establish respiration. The cord and placenta were small. Having effected respiration, &c., I passed the child to the nurse, and immediately placed my hand over the uterus as is always my custom under any circumstances, and found contractions going on firmly. A bandage was then applied, and the soiled clothing about her person and the bed immediately removed.

But a few minutes were occupied in these arrangements; yet during these attentions I observed that labored respiration continued the same as when in the process of parturition. She breathed as from over-exertion by running; she would momentarily fall to sleep, with stertorous respiration. The pulse was rapid and small, easily compressed. Again I suspected hæmorrhage; and again I examined, but no unusual amount appeared—no more than usually appears in a primipara. I resorted to stimulants at once. I used wine at first, as we had no brandy at hand; also gave an opiate with plumbi acetat.; did not repeat it. Brandy was obtained, and its use begun at once. The extremities were cold. Applied warm blankets and warm sad-irons to feet and legs. Under these administrations the pulse came up a little and the extremities began to grow warm. I hoped for a better condition of things before morning: yet I feared a fatal result; exhaustion seemed at hand; the veiled power moving the living machinery seemed withdrawing; the character of respiration did not improve; the disposition to somnolence with stertorous breathing only while she slept, continued. At this stage of affairs, I left for an hour with instructions to continue stimulants and external applications blankets and sad-irons to the extremities, and napkins folded and wrung from iced water placed over the region of the uterus. On my return no improvement could be discovered except a little better color in the lips. Through all this time she had not been unconscious, except for a moment while asleep; yet at times unable to speak. She answered questions only in monosyllables, except in two or three instances. Once she volunteered a remark that she was just one hour under my attendance when her child was born—and again on my calling her attention to a lady who came in to wait upon her, she looked up and addressed her with "good evening."

Again, to be certain that hæmorrhage did or did not exist, I removed the napkin from the vulva, making a satisfactory examination. Nothing unusual could be ascertained. I examined the abdomen particularly with reference to rupture of the uterus, and the possibility of bleeding into its cavity; there were no indications of the kind. I was satisfied that hæmorrhage was not the cause of the serious condition I had to deal with. (What could it be?) At this juncture of affairs, between 10 and 11 o'clock, with gloomy forebodings I left the house, directing a continuance of the stimulants and application of the warm blankets and warm irons, and removal of the cold napkin. About 4 o'clock in the morning following, her husband came to my door, stating it seemed more and more difficult to arouse her from sleep. I directed the application of mustard to various parts of the body, and a continuance of the remedial measures already directed. He returned to his house, and I am informed she died in twenty minutes.

I am also informed by her husband and nurse that, for the past week or two, she had complained of *extreme* weakness, but of no particular pain; had been unable to walk much for a "considerable time;" and that her weakness had reached a condition that rendered her unable to retain her fæces and urine; there seemed to be no power to control the sphincters. How long this serious condition of things had existed I have been unable to ascertain; but it had gradually grown upon her. She had been occasionally subject to diarrhœa for two or more years; especially when the system was disturbed by a slight cold or over-exertion. For the last six or eight months it had become more and more troublesome, till recently involuntary discharges have frequently occurred. I have been unable to ascertain the character of the stools, except they were watery. I have no knowledge of the action of the urinary organs or the character of the secretion of the kidneys. Vomiting in early pregnancy was only slight; but during the later months it has been more troublesome; and especially the past few weeks. I am told the substance thrown up was "slimy, watery, and dark colored." She vomited a similar substance just before she died.

I have learned that respiration has been disordered "for some time;" that it has required a good deal of effort to speak or converse. There was œdema of the feet and legs; more or less anasarca of the whole body. Had the patient been under my care or observation, I could have been much more definite in my description of the condition and action of the various functions of the system which would have enabled you to more easily determine the cause of this mournful event. In summing up the prominent symptoms you perceive *unusual pallor, great debility, disordered respiration, increasing prostration, diarrhœa, nausea and vomiting, œdema of the legs, general anasarca*, all comprising to produce *exhaustion*, ending in death, precipitated by pregnancy and the process of parturition.

A full analysis of this remarkable case requires more attention and time than I can devote to it on the present occasion.

The case, it seems to me, is rare in frequency. The microscope has revealed some of its secrets, yet there remain profound mysteries in the channels of the human system, that the crucible of science has failed to unfold to the vision and understanding of man. I leave this sad theme to your reflection and independent judgment.

What is your diagnosis in the case? Let me hear from you at an early opportunity, and believe me

Very truly your obedient servant,
C. Alexander.

The distinguished surgeon, Professor W. Boeck, of Christiania, Norway, so well known by his experiments in syphilization, and his contributions to dermatology, has been recently a visitor in this city. At the Massachusetts General Hospital, on Thursday last, in place of the usual clinical lecture, Prof. Boeck, by invitation, gave an exposition of his views on syphilization. He was listened to by the large class in attendance on the summer school, and by a number of medical gentlemen interested in the studies with which Prof. Boeck has identified his name. His heretical opinions on the value of mercury in syphilis, and his belief in the duality of syphilitic virus, so much at variance with the teachings of our medical school, may have surprised some of the younger students; but the honest conviction and modest positiveness of the speaker must have pleased his most doubting auditor. Prof. Boeck is about to visit the Norwegian Colony in Minnesota, to observe the influence of climate on the elephantiasis so prevalent in Norway, and the knowledge of which has already been enriched by the researches of himself and Bidenkap.

Broken Ribs in the Insane.—In a letter addressed to us from Dresden, Dr. O. F. Wadsworth, formerly assistant editor of this Journal, writes thus:—

Apropos of the question of broken ribs in insane patients, which I see you have been referring to lately in the Journal. The subject was brought to my mind by seeing the autopsy of a man in Zurich, who died twenty-four hours after injury from a falling tree. There was fracture of the base of the skull, and compound communited fracture of the lower end of the left humerus, but also—what was not diagnosticated during life—fracture of the 2d, 3d, and 4th ribs on the left side, laceration of the costal pleura over these, and almost complete collapse of the left lung, though no laceration of the lung was discovered. There was however no emphysema, and no local external sign of injury.

Speaking with Prof. Eberth on the subject, he told me that Prof. Gudden, recently appointed to the charge of the new Insane Asylum in Zurich, had formerly seen several cases of broken ribs in insane patients—in one case as many as eighteen—without external signs of injury, which were produced by blows of the fist, foot or knee, from the attendants. As this was only the day before I left Zurich, I was unable to make further inquiries of Prof. Gudden himself.

To Him of Richmond and Louisville:

The subject knows he has a red nose; but yet there is n't a more temperate man in the United States than *nos*. "How"—can you?

THE PHARMACOPŒIA.

SIXTH DECENNIAL CONVENTION OF THE PHARMACEUTICAL ASSOCIATION.

The sixth decennial convention, to revise the Pharmacopœia of the United States, met in the hall of the National Medical College, Monday, May 2d, at 10.30, A.M.

On motion of Dr. Miller, secretary of the convention of 1860, Dr. Carson, of Philadelphia, was called to the chair, and Dr. John C. Riley, of Washington, chosen secretary *pro tem.*

Dr. Miller moved that a committee of five be appointed to nominate permanent officers of the convention, which was passed, and the chair appointed Dr. Squibb, of New York; Dr. Ruschenberger, United States Navy; Mr. Colcord, Massachusetts; Dr. Geo. M. Dove, Massachusetts, and Dr. Jenkins, Kentucky. * * * *

On motion of Dr. H. C. Wood, of Philadelphia, it was—

Resolved, That such members of Congress of the two Houses as are graduates of regular medical schools shall be invited to attend the meetings of the convention and participate in its deliberations, and also the Surgeon General, U. S. A., and Chief of Bureau of Medicine and Surgery, U. S. N.

The committee to nominate permanent officers, reported as follows: President, Dr. Jos. Carson, Philadelphia; vice-presidents, Drs. Thos. Miller, D. C., and Wm. Procter, Jr., Philadelphia; secretary, Dr. John C. Riley, D. C.; assistant secretary, Dr. Jas. M. Morgan, D. C.

Dr. Carson, on taking the chair, expressed his thanks to the body in a few touching and expressive remarks, and announced that the convention was ready to proceed to business.

Alfred B. Taylor submitted the report of the Committee of Revision and Publication of United States Pharmacopœia for 1860, which was accepted.

The President then called for contributions from societies, when the following were presented: Albert E. Ebert, Chicago College of Pharmacy; H. C. Wood, M.D., College of Physicians, Philadelphia; Wm. Hegeman, New York College of Pharmacy; Alfred B. Taylor, Philadelphia College of Pharmacy; J. Farris Moore, Maryland College of Pharmacy; which were referred to a committee of five to report a plan for the revision of the pharmacopœia.

On motion of Dr. Lee it was ordered that all societies not prepared to report have permission to hand in their reports to the committee of revision.

The president announced the following as the committee to report a plan to revise the pharmacopœia: D. Bridges, W. Procter, Jr., Colcord, Walford and Lee.

SECOND DAY.

The convention was called to order at 10, A.M., by Dr. Carson, the president, and the minutes of the preceeding day were read and approved.

Dr. Howard, from the committee on credentials, reported the following additional delegates: Wm. K. Bowling, M.D., University of Nashville, Tenn.; S. C. Chew, M.D., University of Maryland; Silas L. Loomis, M.D., and Charles B. Purvis, M.D., Howard University Pharmaceutical College; Frederick Horner, Jr., University of Virginia; Charles H. Thomas, Woman's Medical College, Philadelphia.

The chair presented a communication from the Missouri Medical College, which was referred to the committee on revision.

Dr. Lee, from the committee to report a plan to revise the pharmacopœia, submitted the following report:

The committee appointed with instructions to report a plan for the revision of the United States Pharmacopœia for the year 1870, would respectfully report that they recommend the following resolutions for adoption by this convention:

Resolved, That a Committee of Revision and Publication be appointed, to consist of fifteen members, including the President of this convention as one, to which shall be referred all communications relating to the revisions of the Pharmacopœia, and three shall form a quorum.

Resolved, That this committee shall meet in the city of ——— and be convened as soon as practicable by the President of the convention for final organization.

Resolved, That the committee shall be authorized to publish the work after its revision, and to take all other measures that may be necessary to carry out the views and intentions of the convention.

Resolved, That if, in the judgment of the Committee of Revision, it should become necessary before the meeting of the convention of 1880 to revise its labors, it is hereby authorized to publish a new edition.

Resolved, That the expenses of the Committee on Revision shall be paid from the income of the copyright.

Resolved, That the measures of capacity be abandoned in the Pharmacopœia, and that the quantities in all formulas be expressed both in weights and in equal parts by weight.

Resolved, That in the revision of the official list and formulas the wants of the medical profession in all parts of the United States should be considered in reference to local peculiarities in climate and population, and for these reasons that the scope of the work be rather extended than abridged.

Resolved, That the Committee of Revision shall have power to fill their own vacancies.

Resolved, That after the completion of its labors the committee shall transmit a report of its proceedings to the secretary of this convention, to be laid before the next convention.

Resolved, That the fourteen remaining members of the committee of revision and publication be selected by a nominating committee formed of one delegate from each institution represented in this convention, and of one from the army and navy respectively, to be appointed by the President.

The report was accepted, and on motion the resolutions were considered *seriatim.*

Dr. Amory, of Massachusetts, offered the following amendment to the first resolution: to strike out the three last words, "form a quorum," and insert, "be selected as a sub-committee, who shall report their revision before publication from time to time to the general committee, to be approved or amended, as they may determine;" which was rejected.

Dr. Loomis, of the District of Columbia, moved to strike out "fifteen members," and insert, "one from each State represented," which was rejected, and the resolution as reported by the committee was adopted.

Mr. Colcord moved to fill the blank in the second resolution by inserting "Philadelphia;" which was agreed to; and the resolution was adopted.

After a very interesting discussion the remaining resolutions were adopted without amendment.

Mr. Manlius Smith, of N. Y., offered the following as an additional resolution :—

Resolved, That this committee are authorized to investigate any new medicine that may be brought forward in the future, and devise formulas for the appropriate preparations of it, and to publish such formula in the *American Journal of Pharmacy,* and that these formula shall henceforth be considered official.

Dr. Squibb moved to strike out the words "*American Journal of Pharmacy;*" which was carried.

Dr. Loomis moved to strike out the words "in the future;" which was agreed to, and the resolution, as amended, was adopted.

Dr. Horner, of Virginia, moved the following:

Whereas, The abuse of medicines, the vehicle of which is alcohol, has proved injurious to the health of the community,

Resolved, That the Convention for the revision of the Pharmacopœia consider the expediency of reducing the number of alcoholic preparations.

* * * * *

The following names were presented as the Committee of Revision of the Pharmacopœia, in addition to the chairman, Dr. Carson:

Dr. G. B. Wood, Alfred B. Taylor, John M. Maisch, Dr. Robert Bridges, Philadelphia; Dr. Edward R. Squibb, New York city; Albert E. Ebert, Chicago, Ill.; J. Tarris Moore, Baltimore, Md.; G. F. H. Markoe, Boston, Mass.; Dr. John C. Riley, Washington, D. C.; Dr. Thomas Jenkins, Louisville, Ky.; Dr. Charles A. Lee, Buffalo, N. Y.; Dr. J. S. Wellford, Richmond, Va.; Wm. F. Wentzell, San Francisco, Cal.; W. S. W. Ruschenberger, U. S. Army and Navy.

The report was accepted.

Dr. Squibb tendered his resignation as a member of the Committee of Revision, which was accepted, and W. Manlius Smith, of New York, was elected to fill the vacancy thus created.

Dr. Loomis, of Washington, moved that the rules adopted by the convention of 1860 for the meeting in 1870 be adopted for the convention of 1880, simply changing the dates; which motion was unanimously adopted.

Dr. B. F. Craig, of the District of Columbia, offered the following:

Resolved, That the Committee of Revision be instructed to include some part of the metrical system in the list of official weights and measures.

The resolution after a prolonged discussion was adopted.

Mr. Proctor, of Pennsylvania, offered the following; which was unanimously adopted:

Resolved, That the thanks of this convention are due to the faculty of the National Medical College of the District of Columbia for the use of their building for the purposes of the convention.

The convention, at 5 P.M., adjourned *sine die.*

DEATHS FROM CHLOROFORM.

Deaths from Bi-chloride of Methylene.—Further particulars of the death from chloroform reported in last week's issue.

We regret to know that accidents with anæsthetics still continue unusually frequent. At Moorfields, ten days ago, an elderly man died under the influence of chloroform. He was a patient of Mr. Couper's, and had taken chloroform without any unusual occurrence a short time before. On the second and fatal occasion, very little had been given, and he had struggled violently. The inhaler had been removed in order to add more chloroform; and, whilst it was away from his face, although there was no special change in the man's countenance to excite alarm, his pulse suddenly stopped. He continued to breath for some time after absolute absence of pulse at the wrist. The case remarkably resembles some others on record in this feature, that the pulse gave the first sign of danger. All the usual means of resuscitation were promptly employed, but without avail. At the post-mortem examination, the heart was found very thin, loaded externally with fat, and its muscular fibre also in a state of fatty degeneration. The left cavities were empty, but flaccid.

On the day following this event, a death occurred at University College Hospital, in a patient upon whom Mr. Heath had just performed amputation of the thigh. The patient was a lad, in a very anæmic condition. The operation was completed; and the inhaler (Clover's) had been removed from his face for two minutes, when the heart suddenly ceased to beat.

A death from the effects of bichloride of methylene occurred at Guy's Hospital this week. As deaths under the influence of this agent have as yet been very infrequent, we propose to give the full details respecting it. They have been kindly promised to us by Dr. Bader, under whose care the patient was. *British Medical Journal,* April 30th, 1870, pp. 441-2.

Medical Miscellany.

MASSACHUSETTS MEDICAL SOCIETY.

PROGRAMME FOR TUESDAY, MAY 24TH.

Ten o'clock, A.M.—Operations, Surgical Visit, and Exhibition of Patients at the Massachusetts General Hospital.

Ten o'clock, A.M.—Operations, Surgical Visit, and Exhibition of Patients, at the City Hospital, Harrison Avenue, opposite Worcester Square.

Twelve o'clock, M.—Meeting at Horticultural Hall, Tremont Street, where papers by the following gentlemen will be read:—1, Addison's Disease, by Dr. Thomas H. Gage, Worcester; 2, Preservation of Anatomical Specimens, by Dr. Thomas Dwight, Jr., Boston; 3, Malignant Pustule, Charbon Fever, by Dr. Silas E. Stone, Walpole; 4, Late Contributions to Aural Surgery, by Dr. Clarence J. Blake, Boston; Provision for Care of the Insane, Dr. Edward Jarvis, Dorchester. Adjournment at 2 o'clock.

Four o'clock, P.M.—The Society will re-assemble in Horticultural Hall for the further reading of papers, and for their discussion. Adjournment at 6 o'clock.

During the afternoon the Warren Museum at the Mass. Med. College, North Grove Street, the Warren Museum of Natural History, 92 Chestnut Street, the Cabinet of the Med. Improvement Society, Perkins Building, and the Museum of the Boston Society of Natural History, Berkeley Street, will be open to the Society.

The Annual Meeting of the Councillors will be held at the rooms of the Society, Perkins Building, No. 36 Temple Place, at 7.30 precisely.

PROGRAMME FOR WEDNESDAY, MAY 25TH.

The Annual Meeting of the Society will be held in Horticultural Hall, at 10 o'clock, A.M., CHAS. G. PUTNAM, M.D., President.

Order of Proceedings.—1, Ordinary Business; 2, Reports of Committee; 3, Medical Papers and Communications.

At 1 o'clock, precisely, the Annual Discourse, by W. W. WELLINGTON, M.D., of Cambridgeport.

The Annual Dinner will be served in the Horticultural Hall, at 2, P.M. Music by Gilmore's Band. G. H. LYMAN, M.D., Anniversary Chairman.

ILLNESS OF SIR THOMAS WATSON.—The whole profession will hear with much concern that Sir Thomas Watson has been seriously ill. The attack began during the cold weather with severe muscular and neuralgic pains in the back and one thigh. This attack confined him to bed. Then, probably in consequence of a chill while sitting up in bed, he got inflammatory congestion of the lower part of both lungs. The pulmonary symptoms soon began to subside, and have now almost passed entirely away. Sir Thomas is still confined to his bed; but there is every reason to hope that he will continue to make steady progress towards complete recovery. The medical friends in attendance upon him are Dr. Burrows and Dr. G. Johnson.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending May 7, 1870.

Cities and towns.	Number of deaths in each place.	PREVALENT DISEASES.	
		Consumption.	Pneumonia.
Boston . . .	117	25	15
Charlestown	11	3	1
Worcester . .	15	5	2
Lowell	18	2	1
Milford	10	4	0
Chelsea	6	2	1
Cambridge . .	12	1	2
Salem	10	1	0
Lawrence . . .	5	2	0
Springfield . .	3	0	2
Lynn	11	6	0
Fitchburg . . .	3	0	1
Newburyport .	4	0	0
Fall River . .	14	2	1
Haverhill . . .	2	1	0
	241	54	26

Boston reports one and Worcester two deaths from smallpox. From all the above-named places there are reported seven deaths from scarlet fever, six from croup, five from typhoid fever, three from whooping cough, three from diphtheria, and two from measles.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending May 14th, 117. Males 58—Females 59.—Abscess, 1—accident, 3—anæmia, 1—apoplexy, 2—disease of the bowels, 1—congestion of the brain, 2—disease of the brain, 6—bronchitis, 3—cancer, 1—consumption, 25—convulsions, 1—croup, 1—debility, 3—diarrhœa, 2—diphtheria, 2—dropsy, 2—dropsy of the brain, 1—drowned, 1—erysipelas, 1—scarlet fever, 4—typhoid fever, 1—hæmorrhage, 1—disease of the heart, 6—homicide, 1—disease of the kidneys, 3—congestion of the lungs, 4—inflammation of the lungs, 11—marasmus, 5—measles, 1—neuralgia, 1—old age, 4—paralysis, 2—premature birth, 5—puerperal disease, 3—smallpox, 1—unknown diseases, 3—whooping cough, 2.

Under 5 years of age, 43—between 5 and 20 years, 7—between 20 and 40 years, 24—between 40 and 60 years, 21—above 60 years, 22. Born in the United States, 78—Ireland, 27—other places, 12.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

NEW SERIES.] THURSDAY, MAY 26, 1870. [VOL. V.—NO. 21.

Original Communications.

ANÆSTHETIC INHALATION.

INTRODUCTORY BY DR. HENRY J. BIGELOW.

MR. EDITOR,—In furnishing, at your request, a copy of the letter sent by the late Sir James Y. Simpson to Dr. Bigelow, now absent, let me say a few words upon the subject of a controversy in which during former years I had some part, and which from various circumstances has of late awakened a new interest.

The medical world will hear with regret of the decease of one who has occupied so distinguished a position as the late Sir James Y. Simpson, and something more than regret will be felt by the many who have enjoyed his kindness and hospitality. The present is not a time for extended controversial comment; and yet it is perhaps possible to review the positions and condense the statements of the following letter in a way to which, if it shall advance the truth at a moment when the subject is fresh in the public mind, its late distinguished writer would have been one of the last to object.

It will be seen that Sir James Y. Simpson considers the introduction of chloroform, and its substitution for ether, to have been on the whole the most important and the culminating event in the history of of Modern Anæsthesia. To this the labors and contributions of the Middle Ages, of Valverdi, Moore, Davy, Hickman, Samuel Jackson, Wood and Bache, Miller, Horace Wells, C. T. Jackson, and Morton, are cited as subsidiary. The announcement in this Journal in November, 1846, which electrified the world, records an occurrence which he views only as one stage in the gradual development of a discovery, of which the employment of chloroform was the grand and final event. In the endeavor to establish this position, prominence is given to incidents remote in history which had been long forgotten and would have remained so. The later but unproved suggestions of Davy, and the varying results of Horace Wells, are brought conspicuously into the foreground; the triumphant American discovery of 1846 is shaded quietly into the middle distance; while the most prominent place is reserved for chloroform, because it has, "if not entirely, yet nearly entirely, superseded the use of sulphuric ether."

But in following out this train of thought may it not well be asked, who will have contributed the most important part to the discovery of anæsthesia, when chloroform shall have been superseded by some less dangerous agent?—an occurrence which will, in this view, again be the great and crowning feature of the discovery. Plainly, this line of argument is not tenable, leading, as it does, to the conclusion that the great discovery of anæsthesia has not even yet been made, and in fact, that it never will be; but that it consists only in the successive substitution of each last and supposed better anæsthetic for a previous one.

The fallacy of this logic grows out of a misapprehension of the nature of the discovery in question, the precise character of which should be borne steadily in mind in testing any claim, whether in the past or future, to have made it. Its essential points should characterize every perfect remedial agent. Ether was the first anæsthetic proved to be *inevitable* as to the individual; *complete* in its effect; and *safe*. The same test may be applied to vaccination, for example. Inoculation by smallpox, although protective, had proved to be dangerous. But the discovery of Jenner, while practically *inevitable* as to the individual, and *complete* as a protection, was *safe*. Jenner was a discoverer; and his claim is invalidated neither by any previous mode of vaccination, nor will it be by any future one. So the discovery of modern anæsthesia is invalidated neither by the previous use of opium, alcohol, and nitrous oxide, nor by the subsequent use of chloroform.

Nitrous-oxyde in the hands of Horace Wells sometimes succeeded, but it also failed; as in his final experiment in Boston. The reason of his failures has never been told, but it was this. He used too small a volume of gas, and its virtue was soon exhausted. He employed a common gas-bag, instead of the large reservoir now successfully in use, so capacious that the inspired and effete gas may be exhaled as waste. In consequence of this error in his method, as inconsiderable as those of many other inventors who have, like him, narrowly missed great results, his anæsthesia was uncertain, and could not be relied on to occur when it was wanted. Its failure became notorious, and Wells actually abandoned his experiments for nearly a year. Then, indeed, when the complete success of ether showed the disheartened experimenter how nearly he had attained to a great discovery, and by how little he had missed it, his attention was again aroused, and he engaged in new experiments; but it was now too late; the discovery had been made.

Modern dental anæsthesia by nitrous oxyde must not be confounded with the uncertain process of Horace Wells. The modern method by the large gasometer is more successful, but this was not the method employed by him. His gas-bag was liable to be inadequate, asphyxiating, uncertain. It was liable to fail.

If etherization had not been discovered, what, at this moment, would the nitrous-oxyde gas-bag anæsthesia of Horace Wells be practically worth to patient or to surgeon?

Horace Wells was not the discoverer of modern anæsthesia, *inevitable, complete, and safe,—"a triple discovery,"* involving three conditions—a notable failure to fulfil one or the other of which, as had happened in all previous experiments, would render it of little value. These three conditions were first fulfilled with ether. The discovery of modern anæsthesia was made with ether. No previous anæsthetic had accomplished such results. No subsequent anæsthetic has effected more.*

Those who remember how the civilized world at once exulted in the great news from Boston, and how for months and even years the question of the discovery of modern anæsthesia was supposed to lie exclusively and indisputably between Morton and Jackson, its two rival and contemporaneous claimants in that city, will examine closely any tardy pretensions based upon a previous imperfect discovery like that of Horace Wells, or upon any past or future modifications or alleged improvements, by chloroform or other agent, of the original, and first wholly successful process of anæsthesia.

HENRY J. BIGELOW.

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* Among the extraordinary and anomalous doings which signalized the late meeting of the "American Medical Association" was a resolution put and carried just before separating, attempting to settle by the snap judgment of a kind of caucus vote, a question of discovery in science which for years tasked the intelligence of scientific men in Europe and this country. This hasty vote finds itself associated with proceedings which the Association has left in *black* and *white* on its record, and which are not calculated to recommend it to public confidence.

HISTORY OF MODERN ANÆSTHETICS.* A SECOND LETTER TO DR. JACOB BIGELOW.

By SIR J. Y. SIMPSON, Bart.

MY DEAR SIR,—A few months ago I saw in an American general newspaper, the gratuitous attack upon me which you had published in the "Boston Medical Journal," but of which you had forgotten to send me either an intimation or a copy—doubtless from accident, and not from intentional discourtesy. Towards the beginning of the present year, I sent, in reply to your groundless accusation, an answer in the form of a letter to yourself; and subsequently I received from you a written note, in which you stated you were "not disposed to pursue the subject further." In consequence, I dismissed the matter entirely from my mind; and I deeply regret, both for your own sake and for the peace and character of our honorable profession, that you have not adhered to your resolution. For I have just received a slip of printed statement, unaccompanied by one word of writing, but drawn up in the form of another letter from you to me, in which you continue the subject in terms perhaps still more bitter and personal than before. On first perusing it, my impression was that it was too querulous in tone and temper to deserve an answer. I then thought of sending back a reply to you, stating, simply and briefly, that the new imputations in it were, one and all of them, without a shadow of foundation in fact, and even more worthless than those in your first. But, on re-perusing it, it struck me that you were considering yourself a representative and champion of the Boston School of Medicine, and that it might be well, once for all, to answer you as such even more fully and perfectly than I had done; and thus state, in my opinion, the great things which the Boston School had done—and had not done—in the cause of anæsthesia; and how mistakes and errors might possibly have originated on the subject between your city and other places which I trusted could be fully removed. Hence pardon me addressing to you the following observations :—

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* The death of Sir James Y. Simpson renders it eminently proper that this paper should appear in the Journal, without the delay we had contemplated interposing in order to give time for some one of the publications which have noticed the controversy to copy the second letter of Dr. Jacob Bigelow, to which this is a reply. The discussion is now completed in this Journal, the columns of which are the only place where it has as yet appeared entire. The senior Dr. Bigelow published his second letter as his "final" communication on the subject; and Heaven's solemn *fiat* has placed the closing seal on this the rejoinder of the late lamented Professor Simpson.

The present communication is taken *verbatim et literatim* from a pamphlet forwarded from Edinburgh. The pamphlet was sent to Dr. Jacob Bigelow, to whom it is inscribed in Dr. Simpson's own handwriting—one of the last autographs, perhaps, ever penned by the celebrated Professor.—[Ed. Boston Med. and Surg. Journal.]

I.—Tendency to Confusion from the Discovery of Chloroform Rapidly Following that of Sulphuric Ether.

From some communications which I have lately received from America, I find that your observations have stirred up there in some minds, the idea that I have held up the introduction of chloroform as an anæsthetic in Edinburgh to be antecedent, in point of time, to the introduction of sulphuric ether in Boston. I feel sure that you and I will mutually agree that never anything so wild or extravagant was hinted or suggested by either of us. The first case of anæsthetic operation under sulphuric ether occurred at Boston on the 30th September, 1846. The first case of an anæsthetic operation under chloroform occurred at Edinburgh on the 15th November, 1847. During the intervening thirteen months I had worked much with sulphuric ether in midwifery, etc. ; and some of our surgeons, here and elsewhere, had used it more or less extensively ; but it was not by any means adopted by all.

At the same time, you must allow me to remark that the ideas on the subject in your own mind, which have excited you to write, have, it appears to me, become chiefly bewildered and confused in consequence of one thing ; namely, of the rapidity with which chloroform thus followed as an anæsthetic after the discovery of sulphuric ether ; and in consequence also of the relative practical adaptability and superiority of the former in many respects, leading speedily to its general substitution in Europe, Asia, Australia, etc., for the latter.

In the "Dispensatory of the United States of America," Drs. Wood and Bache, when speaking of the use of sulphuric ether for inhalation in medicine, observe :—"Many years ago (1796, etc.) its use in this way was proposed by Drs. Beddoes, Pearson and Thornton, in England, as a remedy in certain diseases of the lungs. As early as 1805, Dr. Warren, of Boston, employed ethereal inhalation to relieve the distress attending the last stage of pulmonary inflammation. About the year 1812, in Philadelphia, at a time when nitrous oxide was the subject of popular lectures, the vapor of ether was frequently breathed from a bladder for experiment or diversion, and its effects in producing a transient intoxication analogous to that caused by the nitrous oxide were observed." Now, if in Boston in 1805, or in Philadelphia in 1812, the inhalation of sulphuric ether had been tried to a sufficient depth for its anæsthetic effects to be discovered in dentistry and surgery, while the superior anæsthetic powers and higher practical properties of chloroform in midwifery as well as in surgery remained undetected till 1848—then all this storm of mist and obscurity, which has been attempted within the last few months to be stirred up on the matter, would have been an entire failure, or indeed an entire impossibility. For while the glory of first discovering the induction of surgical anæsthesia by the vapor of sulphuric ether would have been, as it undoubtedly is, American in its birthplace and origin, a Lord Provost of Edinburgh in 1869—or forty or fifty years afterwards—knowing and looking to the fact that chloroform in Scotland and in other parts of Europe, etc., had for the previous twenty years, if not entirely, yet nearly entirely, superseded the use of sulphuric ether, and by its general adoption diffused greatly and everywhere the practice of anæsthesia—might surely, without vindictive challenges and recrimination on your part, have ventured to speak of "the discovery and application of chloroform to the assuagement of human suffering," as "the greatest of all discoveries in modern times in connection with medicine."*

An illustration, however, may show my meaning better than an abstract statement. We have now at present in practice various means of abolishing the pain attendant upon surgical operations, as nitrous oxide gas, sulphuric ether, chloroform, etc. ; and the olden surgeons had others. We have various means also of arresting the hemorrhage attendant upon these operations, as cauterization, torsion, deligation, acupressure, etc. these hemostatic means all arrest hemorrhage by closing up, in one way or other, the open mouths of the cut vessels. They get at one and the same end by three or four different means ; but because these means have been suggested at three or four different and distinct times, anyone displacing the former does not of necessity require to be apologized for and denounced, as you seem rather to think ought to be the fact in the case of anæsthetics. Or take another illustration : The greatest thought ever perhaps broached in practical medicine, was the suggestion in relation to small-pox —and to probably other fatal diseases destined to occur only once in life—that their severity and fatality might be averted, if, instead of the contagious poison producing them being allowed to enter in limitless quantities into the body by respiration, it could be inserted in very small and definite quantities, by inoculation through the skin. Hence small-pox inoculation, and the wonderful protection obtained by it against the fatality of small-pox—an idea brought from Asia and Turkey, and acted on in England in the beginning of the last century. Ere, however, the century was closed, a new variety of matter was proposed to be inoculated by Dr. Jenner, and proved infinitely a greater success. The material used by the old Asiatic and Turkish inoculators was small-pox matter taken directly from pustules on the bodies of human beings who were infected with small-pox. The material used by Jenner was small-pox matter taken from the pustules produced on the udders and nipples of cows who were infected with small-pox poison. That vaccination was thus a modification of small-pox inoculation has never, however, been allowed to detract one iota, I believe, from the merit of the great pathological and practical revolution produced by Dr. Jenner. And the two discoveries—or two prophylactics against small-pox—the Asiatic and English, variolous and vaccine inoculation, have never clashed and been entangled together; for they were in our own country upwards of half a century or more separate from each other in the date of their introduction and discovery. Neither, I think, would the relative merits of the two anæsthetics, the American and the English, sulphuric ether and chloroform, have been commixed in the manner in which they have been confused by you and others, had their discoveries been separated by upwards of half a century also.

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* See the report of the Lord Provost's speech as given in the "Scotsman" of 27th October, 1869.

II.—Earliest Anæsthetic Operations in America, and their Connection with Hartford and Boston.

From ancient times anæsthesia in surgery has been attempted by various agents or anæsthetics; but till latterly with very uncertain or equivocal effects. At the present time three kinds of anæsthetics are principally and specially used in practice, namely:—

1. *Nitrous oxide gas*, now, I believe, employed extensively in dental surgery, etc.,[*] since it was reintroduced a few years ago by Dr. Evans, of Paris; but originally suggested by Sir Humphrey Davy, in 1800, and practically and successfully employed by Dr. Horace Wells, in Hartford, in 1844.

2. *Sulphuric ether*, first used by Dr. Morton, at Boston, in 1846.

3. *Chloroform*, first employed in Edinburgh, in 1847.

There have been latterly used, also, from time to time, various minor anæsthetic agents, but none of them, I believe, to any great practical extent; though in all likelihood some will yet be discovered of types superior to any we as yet know. In my former letter to you, and on different other occasions, I have with other writers, shown that the ancient surgeons—mediæval, Roman and Greek—were long employed in the search after surgical anæsthetics, and so far succeeded, by making their patients inhale the fumes of narcotic vegetable extracts, drink solutions of them, etc. etc. Apparently afraid that the history and uses of these olden surgical anæsthetics would detract from the merit of the Medical School of Boston, in the discovery of the anæsthetic properties of sulphuric ether, you bitterly denounce in your letter to me the study and consideration of them. Rest assured that no wishes or declamations, either on your part or mine, will wash out or obliterate that or any other point of the past history of surgery. "I did not desire," you exclaim, "to provoke this mediæval history." But was not your *sole* cause of complaint against me, this—that in speaking to the Town Council of Edinburgh one or two sentences regarding chloroform, I omitted—most erroneously in your opinion—to refer to, or speak of, the past history of anæsthetics, say for a quarter or half a century backward? "Your prolix mediæval history," you again querulously complain, "is simply irrelevant, and its application illogical." It is in no degree illogical; but I believe that it would have been quite irrelevant if brought before the Town Council of my native city. My letter to you, as you further again bitterly observe, is "occupied with a cloud of antiquarian dust, of which the only apparent result is to obscure the truth and create a confusion in the mind of the readers, in the midst of which chloroform may be advantageously introduced." Surely, my dear sir, this undignified and calumnious sentence is unworthy alike of the heart and of the pen of Dr. Jacob Bigelow, and requires no answer from me.

But, dismissing the history of the olden forms of anæsthetics, let me direct your attention for a moment to an episode in their more modern history connected with Boston and its medical school. You properly claim for yourselves true and vast merit from the discovery and application of sulphuric ether in dentistry and surgery. Indeed, you almost seem to me to insinuate in your letter that the medical world should have been ever afterwards contented to use sulphuric ether, and it alone. For you now argue and hold that sulphuric ether (see your last letter) formed a "*discovery of wonderful perfection at its very outset.*" I think, however, Dr. Channing (pp. 322 and 337) alludes to you yourself using chloroform in some midwifery cases; and early in the practice of etherization in midwifery, I found that no busy obstetric practitioner could extensively employ sulphuric ether without inevitably carrying about with him, and upon his clothes, an odour so disagreeable to many other patients and other houses, as to make his presence there aught but desirable. Other Boston surgeons have tried, at least, other anæsthetics besides sulphuric ether, as if they did not look upon it in the way of "perfection," as you do. I have read of your accomplished son, Dr. Henry Bigelow, excising the mamma after he had placed the patient under the anæsthetic influence of nitrous oxide gas (*Official Documents*, p. 323). In your two late articles you have carefully eschewed all reference to this last special anæsthetic, nitrous oxide gas, in despite of its being now largely and successfully employed in Paris, London, and elsewhere, in tooth-extraction. I wish, on the contrary, to recall your attention particularly to it. For let me here again put you in mind that the first anæsthetic operation under sulphuric ether at Boston occurred on the 20th of September, 1846, when Dr. Morton drew a tooth from the head of Eben Frost, who had been previously placed under the influence of the anæsthetic vapor. Nearly two years previously, however, on the 11th of December, 1844, the same anæsthetic operation was as successfully performed at Hartford, the anæsthetic inhaled being not sulphuric ether, but nitrous oxide gas, and the patient being Dr. Wells himself,* to whose mind the idea had suggested itself on the night previously, that a person under a deep dose of nitrous oxide might not feel, when in that state, the pain of tooth-drawing and other operations, because he had seen Mr., now Colonel, Cooley wound his limbs severely against the benches without feeling any suffering from these injuries.*

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[*] See, for example, papers in the last numbers of the London "Lancet" by Mr. Fox, on the use of Nitrous Oxide as an Anæsthetic in Surgery.

A short and adequate experience of a dozen or more cases soon satisfied Dr. Horace Wells and others that teeth could in this way be extracted without pain,† however much trouble there might be in preparing and applying the gas with the imperfect means then in existence. His affidavits of its success (see foot-note) are unchallengable. His friend Dr. Riggs, drew six teeth from one patient, at one sitting, without any suffering whatever. During this time, also, he seems to have discovered the great point which we now know to be so essential in the successful exhibition of nitrous oxide—namely, that it should be breathed as pure as possible, and without any mixture of atmospheric air.‡

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* The account which Dr. Riggs has given, in his official examination in 1852, of this first anæsthetic operation in America, is sufficiently graphic. Messrs. Cooley, Wells, Colton, etc., were present. Dr. Riggs says:—"A few minutes after I went in, and, after conversation, Dr. Wells took a seat in the operating chair. I examined the tooth to be extracted with a glass as I usually do; Wells took a bag of gas from Mr. Colton, and sat with it in his lap, and I stood by his side; Wells then breathed the gas until he was *much* affected by it; his head chopped back; I put my hand to his chin; he opened his mouth and I extracted the tooth; his mouth still remained open some time; I held up the tooth in the instrument, that the others might see it; they, standing partially behind the screen, were looking on. Dr. Wells soon recovered from the influence of the gas, so as to know what he was about, discharged the blood from his mouth, swung his hand, and said, 'a new era in tooth-pulling!' He said it did not hurt him at all. We were all much elated, and conversed about it for an hour after." (See "Appendix, Dr. Colton's *Statements*," p. 95.)

* This occurrence took place at the public exhibition of, and lecture on, laughing gas by Mr. Colton. The advertisement for Mr. Colton's lecture, published in the *Daily Times* of December 10, 1844, has been re-published in the *Daily Journal* for February of the present year. "The entertainment," says the advertisement, "is scientific to those who make it scientific." For a full account of the effects produced by the gas upon some of the most distinguished men in Europe, Mr. Colton refers to "Hooper's Medical Dictionary," where an abstract of the experiments of Sir Humphrey Davy is given.

† In his pamphlet and elsewhere, Dr. Wells brings forward sworn affidavits, from different patients, of the anæsthetic effects of nitrous oxide gas. Thus, for example, Mr. Burleigh states that after having had an opportunity of witnessing its effects on several persons, he himself breathed it, and he adds:—"Two carious teeth were extracted from my lower jaw without the least suffering on my part, though ordinarily, owing to the firmness with which my teeth are fixed in my jaw, I suffer extreme pain from their extraction." "Dr. Wells," states Mr. Goodrich, "was most successful in extracting for me a large, firmly set bicuspid tooth, without the slightest sensation of pain. I also witnessed, soon after, a repetition of the same process by Dr. Wells upon several individuals, accompanied in every instance with perfect success," etc.

‡ See Dr. Morton's volume of "Official Documents," p. 29, etc. "The less atmospheric air is admitted into the lungs with any gas or vapor the better—the more satisfactory will be the result of the operation." Dr. Morton, unaware of the rules for breathing nitrous oxide, denounces this observation of Dr. Wells as "inconsistent with fact." "This agent"—nitrous oxide gas—"*never*," stoutly avers Dr Morton, "was, nor can it ever be of any value" (Official Volume, p. 12). Dr. Morton's first chapter in this volume against nitrous oxide reads now, I fear, as only an exhibition of jealousy and ignorance; and Prof. Jackson's letter against Dr. Wells (see p. 472 of the same volume) is still more painful and inexcusable in its tone and character.

Elated with his discovery, he in a week or two proceeded to Boston, in order to lay it before the medical faculty there, and show its effects; and first made it known there—according to his own account—to Drs. Warren, Heyward, Jackson, and Morton, the last gentleman being a former pupil and partner of his own, and destined to be the future discoverer of anæsthesia by sulphuric ether.*

A case of amputation was about to be performed by Dr. Heyward in the Massachusetts Hospital, but was put off for some days. After Dr. Wells had addressed Dr. Warren's class on the subject, it was proposed that the anæsthetic should be tried in the case of a tooth-extraction. "Accordingly," writes Dr. Wells, "a large number of students, with several physicians, met to see an operation performed—one of their number to be a patient. Unfortunately," he continues, "for the experiment, the bag was withdrawn much too soon, and he was but partially under its influence when the tooth was extracted. He testified that he experienced some pain, but not so much as usually attends the operation." The audience pronounced it a humbug affair and an imposition, and Dr. Wells was hissed away, left Boston, and gave up, for a time, his profession in disgust and vexation. "He was laughed at," contemptuously writes Dr. Charles T. Jackson, "for his pretensions, and left Boston. No one ever believed in his story." ("*Official Documents*," p. 472.) According to the statements of Dr. Morton, his friend and former partner, who accompanied him, "the spectators laughed and hissed; the meeting broke up, and we were looked upon as having made ourselves very ridiculous." (See "*Official Documents*," p. 47.) In these experiments, Dr. Wells, as I have said, used the nitrous oxide gas, which in 1800 Sir Humphrey Davy had in England found capable in his own person of removing intense physical pain, and which he consequently suggested as "capable of destroying physical pain during surgical operations in which no great effusion of blood takes place." In your late letter to me, however, you maintain that "Sir Humphrey Davy," to quote your own extraordinary words, "*must* be exonerated from all practical knowledge of anæsthetic inhalation, otherwise he is chargeable with all the tortures of amputation and lithotomy which have taken place since he made the discovery and concealed it." You have used, I know, the same mild and irrelevant argument against Dr. Jackson which you here use against Sir Humphrey Davy, forgetting that their profession was that of chemists and not of surgeons. Have you really any hope or expectation that, either in Boston or elsewhere, such a violent observation as I have just now quoted, will blot out and erase in some cabalistic way the remarkable fact that Sir Humphrey Davy, seventy years ago, relieved intense physical pain in his own person by breathing nitrous oxide gas, or that he suggested that it might be used as an anæsthetic in some surgical operations, and—published the suggestion?

But now mark what subsequently occurs. An American dentist works out to its practical results the suggestion published in England half a century before by Sir Humphrey Davy, and which you seem to wish to efface from anæsthetic records; and he travels a long distance to place the important result before the Medical School at Boston, and some surgeons of the Massachusetts Hospital. There is a slip in the single experiment allowed him. He is spurned and hooted away. In doing this the Medical School of Boston thus delays the whole subject of artificial surgical anæsthesia for a couple of years. Was not the Medical School of Boston then, in your violent language, "chargeable with the continuance of operative tortures," for that period, much more than Sir Humphrey Davy? Did not your school stamp out—and thus prevent for two years more—the "most beneficent discovery," to use again your own grandiloquent words, "which has blessed humanity since primeval days of paradise"?* I am using here not my language and logic, but yours.

It is perhaps here unnecessary to add that there is sufficient evidence that Drs. Wells, Marcy, and Goodrich debated the question together whether sulphuric ether would not be an agent preferable to nitrous oxide in these experiments. (See "*Official Documents*," pp. 26, 27 and 43. Appendix, pp. 87, 111, 114.) But Dr.

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* See the Appendix to Dr. Morton's volume of "*Official Documents*," pp. 11, 14, 15, etc., and Dr. Wells' pamphlet about the history of the discovery of the application of nitrous oxide gas, p. 6, etc.

* Of course unaware of the comparative perfection to which Dr. Horace Wells' method of inducing brief surgical anæsthesia might yet be brought, the select committee of the House of Representatives of the United States in 1852 report so far against the material utility and success of Dr. Horace Wells' claims; but they add "he had the merit to carry out practically the idea suggested by Sir Humphrey Davy of rendering by the influence of nitrous oxide gas a patient insensible to pain in surgical operations." "He also," they add, "contributed something in directing the mind of Dr. Morton to the subject." See *Official Documents*, pp. 13 & 16.

Marcy thought nitrous oxide the safer and pleasanter of the two, and also more easy to inhale.[*] In the essay in which your son first describes the inhalation of sulphuric ether in surgery, he points out its similarity to nitrous oxide.[†] "Ether inhaled in vapor," he says, "is well known to produce symptoms similar to those produced by the nitrous oxide." (See Paper read before Boston Society of Medical Improvement, 3d November, 1846.) Dr. Horace Wells had the idea suggested to his mind one day, the 10th of December, 1844, that the inhalation of nitrous oxide gas would prove an anæsthetic in tooth drawing, and he had it proved and verified the next day on his own person. But the step from *using* nitrous oxide gas to using sulphuric ether vapour was slower and yet greater and more momentous in its results. Dr. Morton, who, as his friend and old partner, assisted at Dr. Wells' experiment at Boston, no doubt knew all the results obtained at Hartford, where he twice visited Dr. Wells after 1844; and he evidently, betimes, got the idea or speculation into his head that sulphuric ether might prove successful. From a different line of observation, Professor Charles Jackson was led to the entertainment of the same speculation. Assisted, apparently, by one or two hints from Dr. Jackson regarding the pure quality of the ether, or, possibly, its easiest mode of exhibition, Dr. Morton verified the speculation on the 30th September, 1846, by operating on Eben Frost, and fixed that date as an era in science.

III.—ETHERIZATION, OR ANÆSTHESIA, IN MIDWIFERY.

The first operations under anæsthetic inhalations in America occurred therefore, as we have seen in the last section, at Hartford, and not in Boston. In Hartford it was effected by an anæsthetic gas, long before suggested by Sir Humphrey Davy. But at Boston you at first retarded, for a time, the whole process of anæsthesia, by rejecting the evidence of it offered you by Dr. Horace Wells. For, to quote the words of Dr. Riggs, "there (in your school) he met with a reception so cold that, after a single imperfect trial of the gas, amidst the sneers of those around him, he left Boston in disgust, and sick at heart at the unfair disposition manifested towards him." Besides erring in this direction you must permit me to add that in my opinion some of the Boston physicians have also erred in quite an opposite direction. For, after once making the discovery of the superinduction of anæsthesia by sulphuric ether, you seem inclined to hold that the subsequent merit of everything connected with etherization belongs to Boston, and to Boston exclusively.

The object of your first article on the present subject was to show that, because when I received the burghership of Edinburgh, I omitted to allude to the previous use of anæsthetics at Hartford and Boston, I was therefore deliberately guilty of trying to appropriate what belonged to my American brethren. In my reply to you, whilst showing that I was entirely guiltless of any such appropriation in thought or in word, I pointed out that, strangely enough, you yourself were in the same article openly and flagrantly guilty of the unprofessional misdemeanor of which you accused me; for, in claiming, as you there did, for Boston the introduction of anæsthetic inhalations, in obstetrical practice, you attempted to annex and appropriate to your country what most indubitably belonged to mine.

In your last letter you begrudgingly state to me, "I do not *now* question that you were the first to use ether in labor;" and then you superciliously add, "but who first introduced anæsthetics in obstetrical practice is a matter of limited importance." According to the testimony, however, of our late mutual friend, Sir John Forbes, the application of anæsthetics to midwifery involved many more difficult and delicate problems than its mere application to dentistry and surgery. New rules required to be established for its use—the time during which it could be given ascertained—its effects upon the action of the uterus, upon the state of the child, and upon the parturient and puerperal state of the mother, etc., all required to be accurately studied. Would it increase or diminish the tendency to convulsions, hemorrhage, and various other complications? Moral and religious questions also came to be involved, and required to be duly answered. The Boston patent for the use of sulphuric ether, taken out by Drs. Morton and Jackson, did not, I believe, include its employment in midwifery; and your son, Dr. Henry Bigelow, weeks after its use was first begun, deemed it only "adapted to operations which were *brief* in their duration, whatever be their severity. Of these the two most striking, perhaps, are *amputations* and the extraction of teeth."* This was published in November. When I saw Mr. Liston in London, during the following Christmas holidays, he expressed to me the opinion that the new anæsthetic would be of special use to him—who was so swift an operator—as he thought, like Dr. Bigelow, it could only be used for a brief time. I went back, however, from this London visit to Edinburgh, bent on testing its applicability to midwifery, and found that it could be safely used for hours, etc.

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[*] It is unnecessary to enter here into the discussion whether Dr. Marcy, of Hartford, in 1844 or 1845, removed without pain a tumor about the size of a walnut from the head of a young man who was at the time anæsthetized by the vapor of sulphuric ether (see volume of *Official Documents*, p. 27, and Appendix, p. 132, &c.). If so, he forestalled the use of sulphuric ether at Boston as an anæsthetic in surgical operations. But his experiment was so far sterile as the employment of sulphuric ether in surgery did not spread from that point.

[†] In the volume of "*Official Documents*," p. 372, there is one case entered, suggestive of the applicability of artificial anæsthesia from breathing sulphuric ether, quite similar to Colonel Cooley's experience with regard to nitrous oxide. "A young gentleman, ten years since, who is now a physician, was inhaling ether for amusement, as was the custom at Harvard College. He took enough to make him so insensible that he fell upon the floor. In falling he cut his head badly. On recovering he was *unaware* that he had injured himself at all."

But is its application to midwifery of "limited importance," as *now* in the fervour of disputation you seem anxious to affirm? Your words in your first article regarding the commencement of anæsthetics in Boston are these:—That anæsthetic inhalation "began in this country, and was *first* used in the extraction of teeth, and afterwards (2) in capital operations in the Massachusetts General Hospital; and (3) in obstetrical practice." You adduce thus three kinds of practice in which it was used in Boston—namely, (1) dentistry; (2) surgery; and (3) midwifery. You have omitted medicine, probably because you well knew the employment of the inhalation of sulphuric ether had been introduced (as we have seen in a previous part of this letter) into medical practice by Dr. Pearson half a century before. Holding as you now affect to declare, that the use of anæsthetics in obstetrical practice is a matter of limited importance, upon what ground, may I venture to ask, did you, only two or three months ago, in your first attack, adduce its application to midwifery as one of its three chief applications? Further, among these three chief applications, may I ask you, in all honor and honesty, is its use not—even in your opinion—a matter of infinitely less importance in dentistry than in midwifery? Of the relative value of any new practice, such as artificial anæsthesia, we are bound to judge by its utility, not in any specialized practice, as that of a surgical hospital, but in the general practice of the general practitioner. Now most general practitioners have twenty or thirty cases at least of labor in which they may employ anæsthetics for every one case of surgery in which its use could be adopted by them; surgical cases being rare, and obstetrical cases common in general practice. You practice, and have, I believe, all along practised chiefly as a physician, and are hence, perhaps, no good judge in the matter; but let me extract for you from the volume of "Official Documents" published by your townsman, Dr. Morton, the opinions of one or two general practitioners on the subject. "It is," says Dr. Appleton, "in obstetric practice that I have most frequently used these most valuable agents, and I regard their usefulness in this relation as among *the most* valuable results of their discovery." "In private practice," writes Dr. Ellis, "its most happy and beneficial effect is in obstetrics * * * * its benefit, if in no other, in this class of cases alone, *is the greatest discovery* in any age of the world for the relief of suffering humanity." (*See* vol. of "Official Statements," pp. 180, 182.)

You profess to deem it a "matter of limited importance" who first introduced anæsthetics into midwifery. Perhaps it is so. But you will excuse me adding that at the time of the first application of anæsthesia to obstetrical practice—amidst the hundreds and thousands of practitioners who were then engaged in midwifery in the Old and the New World—I happened to be the first who took up the subject and worked out most of the problems connected with it. Any one of these hundreds and thousands might certainly have done the same, but did not do it.

Let me here add that I would not have dwelt thus long upon the application of anæsthetics to midwifery, did I not feel compelled to add that other of your medical townsmen have seemed quietly on this head to have tried like you also to appropriate to Boston what belongs to Edinburgh. Thus Dr. A. Gould, in his official deposition in 1852, speaks of "the first administration of sulphuric ether in obstetrics by Dr. N. C. Keep,"* of Boston, as "a similar step in the discovery" as anæsthesia in dentistry and surgery. In my former letter, however, to you, I showed you that Dr. Keep's case, here alluded to by Dr. Gould, did not occur in Boston till weeks and months after the practice of anæsthesia in obstetrics had been fully studied and established in Edinburgh. Besides, I find now, on looking over the large volume published on Etherization in Midwifery, by my friend, and your townsman, Dr. Channing, that—avoiding all allusion to the midwifery cases reported, and the papers published upon etherization in midwifery, in Edinburgh, weeks previously to the occurrence of Dr. Keep's case in Boston—he speaks also of Dr. Keep's as if it were the first instance in which ether had been employed in obstetrics. But this, perhaps, is merely an omission, as in a holograph inscription of his volume to me, Dr. Channing duly acknowledges that I was the first to introduce anæsthetics into obstetrical practice; and in the dedication of his work, he speaks, let me add, of midwifery as being a department which has derived "*special* and *vast* benefit" from the application of anæsthetics.

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* See the paper which he read, five or six weeks after the introduction of sulphuric ether, before the Boston Society of Medical Improvement, as cited in Brooks' Essay on the Vapour of Sulphuric Ether, page 30.

* Dr. Keep's case happens to be described by Dr. Channing in such words as to *leave it equivocal* whether or not it was the first obstetric instance in which sulphuric ether was given in Boston or America only, or in the world. Dr. Channing's account of it is as follows:—"The anæsthetic power of sulphuric ether, when inhaled, was first used in childbirth in this city, in a case of natural labor, on the 7th April, 1847, by Dr. N. C. Keep, and was successful." ("Etherization in Childbirth," by Channing, p. 26.)

According to your reasoning (?) in the case of Sir Humphrey Davy, that great philosopher "must be exonerated from all practical knowledge of anæsthetic inhalation; otherwise he is chargeable with all the tortures of amputation and lithotomy" which have taken place from his time till the end of 1846. According to the same ratiocination, were not you and the other accoucheurs of Boston chargeable with all the tortures of childbirth and parturition borne by the female population of that city for months onwards after October, 1846; or, till the knowledge of the mode of relieving them from these tortures was sent out from Edinburgh—seeing the use of ether in labor was a matter of "limited importance," and could or should have been discovered months previously in your city, and not in Europe?

4.—Alleged Neglect Of American Claims In Writing A Sketch Of The History Of Anæsthetics.

The chief or only subject of your attack upon me in your first article was the frivolous allegation that, when last year I received the honorary burgess-ship of Edinburgh, and when I had to speak on various and different topics, I omitted to do justice to your city and to America, by omitting to talk of the discovery of sulphuric ether as an anæsthetic, when I was called upon to answer an observation or two of the Lord Provost's on chloroform.*

In your last letter, following out the same jealous strain of complaint, you argue that, besides the alleged omission in an *impromptu* speech, I was guilty, in an article which I had calmly written upon chloroform in the "Encyclopædia Britannica," of not doing "justice to the great American discovery." The article in question was printed in a volume of the "Encyclopædia" for 1854, and has been republished in the second volume of my works, collected and edited by Drs. Priestley and Storrer. In that article, after defining chloroform and stating its composition, modes of preparation, physical, chemical, and physiological properties, I have described at length the various therapeutic uses to which it, and consequently any other similar anæsthetic, could be applied in surgery, in midwifery, in medicine, and in medical jurisprudence; and ultimately I have occupied the last three columns of the article by a brief historical sketch of the various anæsthetic agents which had been used previously to the introduction of chloroform. And this historical sketch is the special object of your new attack.

In giving in my lectures and otherwise, a history of anæsthetics, I have sometimes traced them from the earliest known periods downwards to the present day; but more frequently I have followed the *inverse* order, because I have found it more instructive and interesting—namely, that of tracing them gradually backwards from their most recent to their most ancient form. I have followed this last method in the said article in the "Encyclopædia Britannica," and have hence first mentioned chloroform as then the most recent anæsthetic in the two following lines: "The vapour of chloroform was first proposed by Dr. Simpson as an anæsthetic agent in 1847."

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* Lest there be any mistake regarding the grounds or supposed grounds of all the war which you have tried to stir up against me, let me here cite in full the Lord Provost's remarks on chloroform, and my reply to them. The Lord Provost, let me state, was one of the most intelligent and intellectual men of the age, William Chambers, Esq., the well known author and publisher. His address to me in presenting the burghess ticket was spoken extempore, and I find that his words on chloroform are somewhat differently reported in our three morning journals. The version most favorable for you is the one you select—the "Daily Review"—and is as follows: "I will not dwell on what you have accomplished in medical science. I will only allude to your discovery—the greatest of all discoveries in modern times—of the application of chloroform in the assuagement of all human suffering. That was a great gift to mankind at large, and it well befits us, the Corporation of Edinburgh, to mark our sense of the great act of beneficence on your part by this small compliment." His Lordship subsequently alluded to my writings on Acupressure, Hospitalism, etc., etc.

With regard to the observations on chloroform, I replied in the two following sentences: "You adverted to the discovery of the anæsthetic effects of chloroform. Perhaps you will allow me to state that there are various manufactories of it in Great Britain, and that a single one of these, located in Edinburgh, makes as many as eight thousand doses a day, or between two million and three million of doses every year—evidence to what a great extent the practice is now carried, of wrapping men, women, and children in a painless sleep during some of the most trying moments and hours of human existence; and especially when our frail brotherman is laid upon the operating table, and subjected to the tortures of the surgeon's knives and scalpels, his saws and his cauteries." (See Journal of the Gynæcological Society of Boston, December, 1869, p. 377.)

I then after these two lines, give about twenty lines to sulphuric ether, beginning thus: "For a year previous the vapor of sulphuric ether had been used to a considerable extent both in America and Europe, for the purpose of inducing insensibility to pain in surgical operations. It was first practically adopted for this purpose in 1846 by Dr. Morton, a dentist at Boston, in America. Subsequently Dr. Charles T. Jackson, of that city, claimed the right of having suggested to Dr. Morton sulphuric ether as an agent capable of producing insensibility to pain. But the power of producing by the vapor of sulphuric ether an insensibility exactly like that produced by the inhalation of nitrous oxide gas, had been long previously known," and so on through its history.* *Thirdly*, I allude to carbonic acid, as suggested by Dr. Hickman in 1828; *fourthly*, to nitrous oxide gas, as hinted at by Davy in 1800; *fifthly*, to compression of the nerves, as used by Dr. Moore in 1784; *sixthly*, to compression of the carotids, as suggested by Valverdi and others in the sixteenth century; *seventhly*, to the fumes and extracts of mandragora, Indian hemp, and other soporific drugs, as practised by mediæval and ancient Roman and Greek surgeons.

Now comes your strong and strange accusation or accusations. For first you hold, as far as I understand you, that the article was written for my "self-exaltation," or, to quote your own words, "in favor of the self-exaltation of the writer." Of any such object I know and feel myself to have been utterly guiltless, either in this or any other of my writings. In the whole course of this long encyclopædic article upon chloroform, if my object had been "self-exaltation," I might, not unjustly, have connected my name with several of the original suggestions and practices stated in the article; but I have mentioned my name only once, and that in the brief historical sentence already quoted, and (I appeal to yourself or any honorable man) such mention was utterly unavoidable for the sake of simple historical accuracy, all such history inevitably involving an enumeration of names.

But then comes your other accusation, that, in enumerating the different methods of producing anæsthesia, I have adduced chloroform *first*, sulphuric ether *second*, carbonic acid *third*, nitrous oxide *fourth*, etc., to "cover"—to use your own reprehensible words—"this inversion of historical order in favor of the self-exaltation of the writer, * * * * who availed himself of this opportunity principally to place himself conspicuously in the foreground."

Believe me, I feel difficulty in commenting upon these criticisms of yours; they are essentially so groundless and absurd; and I know them in my own heart to be so utterly untrue. If an American or English school boy were asked to give a *retrograde* chronological list of the Presidents of the United States, or the Sovereigns of England, from the present time to the commencement of this century, would he not begin with Gen. Grant and Queen Victoria? According to your logic, however, that would imply "self-exaltation" on the part of the pupil; and to avoid this, he ought to commence with the Presidents Johnson and Lincoln, and King William the Fourth. But would not such a strange historical obliquity and misstatement, if unhappily indulged in, bring down condign punishment and contempt on the disciple? And is there not occasionally truth in the saying that "sages sometimes do as foolish things as school-boys"?

If I had the same history to re-write to-day, I do not know that I could or would write it in any different terms, except by pointing out more distinctly Dr. Wells' claims, and also Dr. Jackson's. And pray in what terms would or could you advise me that it should have been written, or should be written now? Ought I to have broken out into some high-flown sentence or sentences regarding the history of the anæsthetic effects of sulphuric ether, when I spoke secondly of that anæsthetic? Would it not, let me ask you, have been more natural—for me at least—to have done so in speaking of the history of the anæsthetic effects of chloroform, instead of dismissing it in the two brief lines I have already quoted; seeing, especially, that I knew that it was employed in hundreds or even thousands of instances for every five or ten in which sulphuric ether was used?

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* You underscore the expression used "to a considerable extent," probably with a view of indicating that that is doubtful; but such, I believe, was the fact here and elsewhere in the first year of etherization. In the "Edinburgh Medical Journal" for September, 1847, I find it stated by me (p. 153) that "during the last six months etherization has been *used to a considerable extent* in British surgery." The editor of the same journal, in his December number—chloroform having been introduced in the interval—observes, "In Edinburgh it (chloroform) has been used publicly by *all* the surgeons of the Royal Infirmary [they had not all used ether], and its employment in midwifery practice is almost universal. Ether," he adds, "has almost been abandoned." (P. 456.)

I have, I find, printed another short epitome of the history of anæsthetics; but I am not sure that it will please you better. In a paper on "Etherization in Surgery," published in September, 1847—the first of a series on this subject—I take occasion to speak of Dr. Morton, of Boston, as "the gentleman to whom I believe the profession and mankind are really and truly indebted for first reducing into practice the production of insensibility by ether-inhalation, with the object of annihilating pain in surgical operations,"—language stronger, I think, than I have seen in most American essays on the subject. And at the meeting of the Edinburgh Medico-Chirurgical Society, on November 10th of the same year, I laid before them a paper termed "Historical Researches regarding the Superinduction of Insensibility to Pain in Surgical Operations; and Announcement of a new Anæsthetic Agent." This communication on the history of anæsthetics, like that in the "Encyclopædia Britannica," took up the subject in retrograde chronological order, beginning with sulphuric ether *first*, as chloroform was not known when it was drawn up a week or two previously. In the abstract of this historical paper, which appeared in the "Edinburgh Journal" (it was never published entire), I find that I traced out, at much length, the chemical and therapeutic history of sulphuric ether, and added as follows: "Its power of producing, by inhalation, effects like intoxication, or like the influence of nitrous oxide gas, he (Dr. Simpson) showed to have been stated by various American authors, as by Professor Samuel Jackson (1833), Wood and Bache (1834), Miller (1846), before it was so fortunately adopted by Dr. Morton as an anæsthetic agent. His belief was, that Professor Charles Jackson improperly claimed the merit pertaining to its recent happy application in surgery, etc. Perhaps the idea of relieving patients from the pains of surgery by some such means, or rather, the restoration of that idea in recent times (for it was an old one), belonged justly to Horace Wells." (See "Edinburgh Monthly Journal of Medical Science" for December, 1847, p. 453.)* From the abstract of this paper it appears that I went chronologically backwards, through various old anæsthetic vapors and measures, to the use of the fumes of Indian hemp in the time of Herodotus. I then took up the last or second part of the paper, and showed the Society the newly discovered anæsthetic, chloroform, and its effects.

At the time at which this paper was read, we had, with almost every mail from America, statements and counter-statements sent as to who was the rightful claimant for the discovery of artificial anæsthesia; and what was conceived to be true the one month, was apt to be upset the next. In none of these statements have I, I think, done sufficient justice to the claims of Professor Charles T. Jackson, for I now believe he had more merit in the discovery than formerly I felt inclined to attribute to him, since I have latterly looked over the large volume of "*Official Documents*" on the matter, presented to "the Select Committee appointed by the Senate of the United States." He held the idea that sulphuric ether vapour might anæsthetize a patient for an operation though he had not reduced in any way that idea to practice; and at first seemed afraid of the possible results of Dr. Morton's experiments, while he avoided witnessing the results. (*Official Documents*, pp. 352 and 446.)

If we try to put into a summarised form the data† which we have been discussing regarding the introduction of anæsthesia in America and this country, it appears to me that we might correctly state the whole matter as follows:—

1. That on the 11th December, 1844, Dr.

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* The epitome has been republished in a volume of mine on "Anæsthesia" (p. 190), printed at Philadelphia in 1849; but it is not republished in the collection of my writings edited by Drs. Priestley and Storrer. I have seen it repeatedly cited, at pretty full length, in American essays on anæsthetics—sometimes with, sometimes without, acknowledgment.

† You must kindly excuse me if some of the data are not strictly accurate in every point, as you know how difficult it is to make medical aphorisms quite correct; for example, in the inscription which you represent as cut upon the monument, lately erected at Boston, to anæsthetics, namely, "To commemorate the discovery that the inhaling [the inhalation] of ether causes insensibility to pain, first proved to the world at the Massachusetts General Hospital, in Boston, October A.D. 1846;" there are, it appears to me, two errors. First, ether and sulphuric ether are two terms not at all synonymous, and still you have inserted the former for the latter. Secondly, it is not strictly true that the effects of sulphuric ether were "first proved to the world in operations at the Massachusetts General Hospital." For to cite the more correct statement of Dr. Channing: "These operations were *first* performed in private practice, and immediately afterwards upon patients in the Massachusetts General Hospital." (Channing "On Etherization," 1848, p. 26.)

Wells had, at Hartford, by his own desire and suggestion, one of his upper molar teeth extracted without any pain, in consequence of his having deeply breathed nitrous oxide gas for the purpose, as suggested nearly half a century before by Sir Humphrey Davy.

2. That after having with others proved, in a limited series of cases, the anæsthetic powers of nitrous oxide gas, Dr. Wells proceeded to Boston to lay his discovery before the Medical School and Hospital there, but was unsuccessful in the single attempt which he made, in consequence of the gas-bag being removed too soon, and that he was hooted away by his audience, as if the whole matter were an imposition, and was totally discouraged.

3. That Dr. Wells' former pupil and partner, Dr. Morton, of Boston, was present with Dr. Wells when he made his experiments there.

4. That on the 30th September, 1846, Dr. Morton extracted a tooth without any pain, whilst the patient was breathing sulphuric ether, this fact and discovery of itself marking a new ERA in anæsthetics and in surgery.

5. That within a few weeks the vapor of sulphuric ether was tried in a number of instances of surgical operations in Boston,—Dr. Morton being generally the administrator;—and ether vapor was established as a successful anæsthetic in dentistry and surgery.

6. That in January, and the subsequent spring months of 1847, the application of sulphuric ether as an anæsthetic in midwifery was introduced, described in our medical journals, and fully established in Edinburgh, before any case with it was tried in Boston or America.

7. That on the 15th of November, 1847, the anæsthetic effects of chloroform were discovered in Edinburgh, and that it swiftly superseded in Scotland and elsewhere the use of sulphuric ether, and extended rapidly and greatly the practice of anæsthesia in surgery, midwifery, etc.

I am very sorry to have taken up so much of your time and my time with such a petty discussion as the present. It has extended to too great a length; but I am a sad invalid just now, and quite unable to write with the force and brevity required. With many of our profession in America I have the honor of being personally acquainted, and regard their friendship so very highly that I shall not regret this attempt—my last perhaps—at professional writing as altogether useless on my part, if it tend to fix my name and memory duly in their love and esteem.

Yours, J. Y. SIMPSON.

DR. JACOB BIGELOW.

Edinburgh, April, 1870.

Reports of Medical Societies.

NORFOLK DISTRICT MED. SOCIETY OF MASSACHUSETTS. REPORTED BY WM. H. CAMPBELL, M.D., OF ROXBURY.

THE Annual Meeting of the Norfolk District Medical Society was held at Hyde Park, on Wednesday, May 11, at 11 o'clock, A.M.

The President, Dr. Cotting, in the chair.

The Records of the last meeting were read by the Secretary, Dr. Jarvis, and accepted.

The Censors reported that they had admitted into the Massachusetts Medical Society, Dr. Arthur H. Nichols, of Roxbury.

The Treasurer made his annual Report, showing a flourishing state of the finances. Accepted.

Drs. Monroe, Salisbury and Green, were appointed a Committee to nominate officers for the year ensuing.

The President and Secretary declined renomination.

The Committee consisting of Drs. Abbott, Alden, Allen, Amory, Arnold, Bacon, Bass, and Blaisdell, appointed to open and continue a discussion at the next regular meeting in July, selected *Inflammation* for their subject. Accepted by the Society.

Voted to meet hereafter at Hyde Park unless otherwise ordered.

Dr. Amory, of Brookline, a Delegate from the Society to the American Medical Association at Washington, presented a Report of his attendance and experiences there; commenting on the undignified proceedings of that body, and on the extraordinary attempt of certain members of the Massachusetts Medical Society in their attempt to prevent the representation of that Society in the American Association; and finished by offering the following resolution:—

Resolved, That, at the next annual meeting of the Council of the State Society, the Councillors of the Norfolk District Medical Society be requested to take the action necessary to bring before the Council, violations of the principles of the organization of the Massachusetts Medical Society. Adopted.

At 1 o'clock, Dr. R. T. Edes, of Roxbury, delivered the Annual Address on "*Practical Medicine as an Exact Science*," of which the following is a short abstract:—

The uncertainty of medicine and the change of theories, are facts which must be admitted, but are paralleled in other branches of knowledge, especially some of those involving the most important human interests, as theology and political economy. But medical science has shared in the general advance of the last century, not only in pathology and diagnosis, but in precision of therapeutics, the gain being not only in better means of investigation, but in more accurate habits of thought.

One of the most important facts recently recognized is the self-limitation of many diseases.

Therapeutics, however, do not stop here. We have no right to draw an artificial line between nature and the agencies used by the physician, whether drugs or others, since we *cannot* take the patient out of the hands of nature; and our means are only natural forces which are under our control used against others which are less so.

Admitting the deficiencies of our art, there is yet great hope for the future, and though we may never discover a cure for every disease, yet we may arrive at a knowledge of that plan which in each case will give the patient the best treatment possible under the existing laws of nature.

To reach such a result, each practitioner, while making the best use of the wisdom of the present, must make his contribution of well observed facts for the future advancement of science.

Voted, That the thanks of the Society be given to Dr. Edes for his interesting and instructive Address.

On Report of the nominating Committee, now presented, the following officers were chosen:—

Dr. Christopher C. Holmes, of Milton, *President;* Dr. Edward Jarvis, of Dorchester, *Vice-President;* Dr. Charles E. Stedman, of Dorchester, *Secretary;* Dr. Eben P. Burgess, of Dedham, *Treasurer;* Dr. D. S. Fogg, of South Dedham, *Librarian.*

Councillors.—Dr. G. J. Arnold, of Roxbury; Dr. H. Bartlett, of Roxbury; Dr. B. E. Cotting, of Roxbury; Dr. B. Cushing, of Dorchester; Dr. G. Faulkner, of Jamaica Plain; Dr. W. C. B. Fifield, of Harrison Square; Dr. F. F. Forsaith, of Weymouth; Dr. J. G. S. Hitchcock, of Foxboro'; Dr. E. Jarvis, of Dorchester; Dr. A. LeB. Monroe, of Medway.

Censors.—Dr. J. S. Green, of Dorchester; Dr. J. Seaverns, of Roxbury; Dr. C. C. Tower, of So. Weymouth; Dr. C. E. Stedman, of Dorchester; Dr. J. Stedman, of Jamaica Plain.

Commissioner of Trials.—Dr. S. Salisbury, Brookline.

Committee of Supervision.—Dr. S. E. Stone, of Walpole; Dr. W. S. Everett, Hyde Park.

After announcing the results of the balloting, the retiring President, Dr. Cotting, on leaving the chair, said; that

Having remained in office much longer than customary, he had felt it quite time to yield it up to other hands, and had therefore declined re-election. Though not unmindful of the honor of an unsought elevation to their highest office, he had been fully aware of the responsibilities attached to it—that it might even become a reproach to an incumbent did he not exert his best endeavors for the true advancement of the Society. In this view, he had labored—not, he hoped, without some useful results, through the effective co-operation of members. Jealous of its good name and desirous that the Society should stand well among its colleagued Districts, he now felt, on looking back, that the members had in reality some cause for mutual congratulations. During these past five years, while the attendance at meetings has increased to nearly double the former average, more than forty papers have been given through the Society to the Boston Medical and Surgical Journal. Some of these were quite valuable, and have been considered, at home and abroad, worthy of reprint, or analysis. Among them might be mentioned that on "Intemperance and Mortality," by Dr. Jarvis; on "Opium Poisoning," by Dr. Monroe, with a novel and successful procedure for relief; on "Our Habits," by Dr. Salisbury; on "Collodion; with formula," by Dr. Maynard, who introduced it into surgical practice; on "Paper splints strapped with slips of iron," by Dr. Campbell—an invention of another member, Dr. Allen, which, for easy preparation for all parts of the body from head to toes, and for effectiveness, especially where curved or bent apparatus is required, needs only to be more known to become of frequent use, particularly in country practice; on the "Hydrostatic Atomizer," by Dr. Arnold; on "Intra-Uterine Scarification," with a new Instrument for the purpose, by Dr. Miller; on "Prolapse of the Cord," with successful cases, by Dr. C. E. Stedman; on "the Medical Botany of Norfolk County," by Dr. Noyes (valuable contributions), and reprinted in the more permanent form of the Half-year Book; on "Weaning," by Dr. Faulkner, a digest of opinion and practice of the present day with useful suggestions, which has gone the rounds of

Medical periodical publications; and two papers, by Dr. S. E. Stone, on "Malignant Vesicle," with cases and resumé, throwing much light on an obscure and dangerous disease, and proving the author to be a good observer and philosophic practitioner. Besides these papers, and others worthy of mention, a number of timely notices of books must not be omitted, bringing to the attention of the profession important works before they were received elsewhere; as for instance, Niemeyer's Elements, destined to have a profound influence upon theory and practice here as well as abroad; the "Dictionnaire Annuel," the most valuable of the yearly compilations, and the "Nomenclature of Diseases," that remarkable work of England's most eminent practitioners; to say nothing of the Reports of the Society's Discussions and Doings, by Drs. Adams, Campbell and others, which will bear comparison reputably with the Reports of other similar societies.

With the above enumeration, which might be increased, and not fearing the charge of mutual admiration, for, as Whipple says, "for one association for mutual admiration there are twenty for mutual contempt," he thought that the members might well congratulate themselves on the relative success of the Society, considering that we were only "country doctors." But why should not country doctors do something for the advancement of the profession, and even of science? "To practise in a country town" was the ludicrously lamentable fate of the hero of a popular professional poem written not long ago for the amusement of a city society near by, but country doctors are now-a-days looking up, and if they will only "speak out" will be better appreciated. "We particularly value the practical experience of country practitioners, many of whom possess a fund of information that rightfully belongs to the profession," is the stereotyped heading of one of our prominent medical periodicals; and within a few weeks (Feb. 12th, 1870) the *British Medical Journal* speaks yet more strongly, in an elaborate editorial, which it would be well for all doubters to read thoroughly and ponder upon.

In his endeavors to persuade members, whom he knew possessed this fund of information, to bring it before the profession, the President said he had often been met with a common excuse that writing was exceptional and difficult, well enough for those who had a talent for it; and it might be worth while to remind the Society that the best things published were not always the easiest written. Professional authors and scholars have often wrought their papers over many times. Chapters of the History of Ferdinand and Isabella were written and re-written seven or eight times; some also of Wayside Thoughts, by a lifelong student, six times; Buckland's Treatise, so many times as almost to exceed belief; and so, too, many other works of value. If any member had the substance, let him not be afraid of the labor of communicating it; and the substance, be assured, is about and before every observant practitioner. Every one may contribute to the common stock, and there is need of all that can be added to it. "An *exact* knowledge of the mode of handling of remedies does not exist," says the *Practitioner*, not a year ago! and again last month, "we really have no principles of therapeutics at all." Think of this and then say if there is not need of the assistance of every one; of older members, that they bring in the results of their experience—it cannot harm them to speak boldly and plainly; of the younger members joining us in such numbers, with all the improved modern facilities and such superior attainments, that they, finding in these topics scope enough for their highest ambition, and difficulties enough to tax their strongest powers, may not let their generation pass with such statements, as he had quoted, possible. Much of this knowledge must be acquired at the bedside of the sick, rather than by experiments upon the well. Examine, therefore, carefully; *prove* all things, and state unreservedly the results to the profession. Do not, said he, fear the old cry of scepticism and heresy. It is the stale snarling of those whose positions are felt to be insecure. It can never do much harm, and may serve to carry one's own rush-light into corners that would otherwise perhaps remain in darkness.

We miss to-day, he continued, a member who set us a bright example in this regard, and whose loss will be to many a life-long affliction. Says one who knew him well: "he was of great mental and moral worth; intellectual, just, honorable; cheerful, kind-hearted, generous, sympathetic, affectionate—a gentleman in all his nature and bearing;" and, it may be added, frank, fearless, philosophical and true. His accurate and reliable observations, ingenuously related, often changed the whole tone of a discussion. Others we have lost in these five years: Stimson, "the excellent and beloved patriarch of Dedham"; the indefatigable and esteemed Woodward, of Quincy; the affable, devoted, dignified and unswerving Fifield, of Weymouth; and still others not to be forgotten; but prominent among all in intellect and wisdom, and in earnest interest in our Society, was the deeply loved and sincerely lamented Ebenezer Stone, of Walpole.

The "*exact* knowledge" he had been speaking of could only be obtained by combined effort. Each practitioner must feel that he owes something to the common stock, and an obligation upon himself to add his portion, however fractional, to the heap, if he expects progress in the Society and the profession. Under the coming administration he hoped that the Society would acquire new vigor and increase in usefulness. To this end they might count on no sincerer well-wisher or more cordial coöperator than their retiring President; and he trusted that each member, by his efforts through the Society, might, in the language of the venerable Holyoke on his 100th anniversary, "enjoy the pleasing consciousness that he has contributed somewhat to the advancement and improvement of the general welfare."

The President elect, Dr. Holmes, on taking the chair, thanked the Society for the honor thy had done him, and pledged his best endeavors to promote its interests and advancement; but he would remind the members that the result must depend on their earnest individual and combined support, rather than on the zeal of the officers. He felt confident, however, that the same generous encouragement would be given to the coming that had been accorded to the outgoing administration.

At 2, P.M., the Society adjourned.

MASSACHUSETTS MEDICAL SOCIETY.

REPORT OF FIRST DAY'S PROCEEDINGS.

A SESSION of the Society was opened in this city on Tuesday, May 24th.

At 10 o'clock operations and surgical visits were held at the Massachusetts General and City Hospitals, which were attended by the Fellows of the Society.

At 12 o'clock the members assembled in Horticultural Hall, where they were called to order by the President, Dr. Charles G. Putnam, of Boston. The papers, which had been previously announced, were then read by their authors in the following order:—

1. Dr. Thomas H. Gage, Worcester—"Addison's Disease."
2. Dr. Thomas Dwight, Boston—"Preservation of Anatomical Specimens."
3. Dr. Silas E. Stone, Walpole—"Malignant Pustule, Charbon Fever."
4. Dr. Clarence J. Blake, Boston—"Late Contributions to Aural Surgery."
5. Dr. Edward Jarvis, Dorchester—"Provision for Care of the Insane."

The reading was interrupted at twenty minutes of two, and resumed at 4 o'clock for the completion of the papers and the discussion of the same.

Evening Meeting.—The annual business meeting of the Councillors of the Society was held at their rooms in Avon Street at 7½ o'clock, P.M., Dr. Putnam in the chair.

The report of the Treasurer, which was read and accepted, showed that the receipts of the Society for the past year were $9,075.38, including a balance of $1,916.37 from the account of last year. The expenditures had been $6,740, and there remained in the Treasurer's hands $2,335.38 for the new year.

The Committee on Resignations presented their report, recommending for the retired list the following names:—W. G. Smith, Cabotville; Wm. F. Perry, Mansfield; Stephen Ball, Boston; Harrison Dickey, Lowell; S. G. Burnap, Holliston.

The following members have presented their resignation of membership:—Thomas G. Nicholls, Freetown; G. C. S. Choate, Taunton; A. S. McLean, Springfield; Wm. H. Holbrook, Palmer. Report accepted.

The President announced the usual standing committees on Publication, Resignation and Finance. The Councillors then proceeded to the annual election of officers, with the following result:—

For President, S. A. Fisk, of Northampton; Vice President, E. Hunt, of Danversport; Corresponding Secretary, C. D. Homans, of Boston; Recording Secretary, C. W. Swan, of Boston; Librarian, J. C. White; Treasurer, F. Minot; Orator, H. J. Bigelow; Anniversary Chairman, Luther Parks; Committee of Arrangements, C. D. Homans, R. M. Hodges, A. P. Hooker, A. Coolidge, J. N. Borland.

By vote of the Councillors the next meeting of the Society will be held in Boston on the first Wednesday in June next.

SECOND DAY'S PROCEEDINGS.

The annual meeting of the Society was held in Horticultural Hall on Wednesday, May 25th, at 10 o'clock, A.M., the President in the chair.

After the reading of the Secretary's records of the last meeting, the President introduced the delegates from other Societies, of whom Dr. Diderman of Syracuse, N. Y., Dr. Corliss of Greenwich, N. Y., Dr. Porter of New London, Conn., and Dr.

Cushing of Vermont, addressed the meeting.

Dr. David W. Cheever, of Boston, exhibited to the Society a "*New Mode of demonstrating Hernia*" by colored illustrations, designed and executed by Dr. Geo. L. Underwood, of this city, a Fellow of the Massachusetts Medical Society.

Dr. Cheever said that the idea of demonstrating hernia by colored sections had suggested itself to him on account of the extreme difficulty he had always experienced in teaching this subject to a class.

These pictures were in water-colors, drawn by hand, and mathematically enlarged from the standard plates of Cooper, Scarpa and Cloquet, to two and a half times life size. They were in no sense diagrams, but correct anatomical plates of hernia.

Their distinctive peculiarity consisted in their being so drawn on different planes that each covering of fascia or muscle could be turned back in separate layers, thus imitating the order of Nature, and making apparent to a large number of persons minute details of anatomy, which they could otherwise see only one by one.

Dr. Sullivan, of Malden, presented a communication from the Middlesex South District Medical Society, in reference to that portion of the By-laws which allows graduates of Harvard Medical School and the Berkshire Medical School to become members of the Society on presentation of their diplomas from the same. He moved "that the By-laws of the Massachusetts Medical Society be and are hereby amended, to wit, by striking out the following paragraph of Article 1st of said By-laws :—'But any person having been graduated as Doctor of Medicine at Harvard University or the Berkshire Medical Institution shall, if otherwise qualified, be admitted without further examination as to his medical attainments.'"

At this point the Society adjourned for five minutes, and, on being called to order, the motion of Dr. Sullivan was passed.

Dr. Sabin, of Williamstown, with a few appropriate remarks, presented a series of resolutions, commemorative of Dr. Alden March, of Albany, a native of Massachusetts, and always a hearty sympathizer with the members of this Society. Dr. Corliss, of the New York State Medical Society, concurred with Dr. Sabin in his estimate of Dr. March's character, and the resolutions were then passed.

The Society then listened to the Annual Address, by Dr. W. W. Wellington, of Cambridge.

(To be continued.)

Medical and Surgical Journal.

BOSTON: THURSDAY, MAY 26, 1870.

CLINICAL RESEARCHES UPON DISEASES OF THE ŒSOPHAGUS; BY DR. W. HAMBURGER.

WE translate what follows from the *Gazette Hebdomadaire*, which Journal in turn takes it from the *Medizinishe Jahrbücher*.

We have pointed out on a previous occasion, says the *Gazette*, the very interesting researches of Hamburger upon the auscultation of the œsophagus, * * * * and now are about to notice the teachings of that observer with regard to diseases of the organ in connection with the application of auscultation to their diagnosis.

To repeat the previous summary of the auscultatory signs during normal deglutition : the stethoscope being applied to the left side of the neck at the level of the os hyoides, while a teaspoonful of liquid is being swallowed, a loud gurgling is heard. It seems as if water were forcibly penetrating the ear of the observer. On auscultation of the œsophagus, between the cricoid cartilage and the eighth dorsal vertebra, on the left side, deglutition is accompanied with a noise analogous to that which would be made by a small fusiform body embraced by a ring of the œsophagus, and passing rapidly down that canal. The contractions of the œsophagus made progressively and in a circular direction upon the ingested liquid produce a peculiar noise, the analysis of which allows of our distinguishing the different stages of deglutition. The nature of this sound is that of an easy gliding, which is readily fixed in the memory. With some care we may learn to distinguish the tone or the *timbre ;* the form of the liquid mass swallowed ; the energy of the œsophageal contractions ; the rapidity of the process of swallowing in the œsophagus ; and the direction followed by the liquid ingested. Now each one of these elements is modified when the œsophagus becomes the seat of lesion.

The function and the structure of the œsophagus explain how the affections of this duct—whether primary or resulting from disease in its neighborhood—all of them result in contraction or dilatation—stenosis or ecstasis. From this stand point, Doctor Hamburger divides œsophageal affections into two principal classes—stenosis and ecstasis. The first class comprises three divisions:—inflammatory stenosis; spasmodic stenosis, or that arising from muscular disorder; and organic stenosis, which is extrinsic or intrinsic, according as the cause is in or outside the œsophagus.

Stenoses.—As we have already mentioned in a former analysis, particular sounds perceived by auscultation, correspond to different degrees, or different phases of contraction: that is to say, to a first stage (swelling of the mucous membrane) correspond retardation in the deglutition of the alimentary bolus and the production of a few bubbles; to the second stage corresponds the noise of gurgling; and to the third the sound of regurgitation. These signs are found in different degrees in the stenoses.

To commence with inflammatory contraction, auscultation combined with exploration of the sound may give important information as to the progress of the affection and as to the prognosis. In *diffused œsophagitis*, neither auscultation nor catheterism is necessary to the diagnosis. The pain, the dysphagia, and the combination of the indications and circumstances suffice for this end. But auscultation is very useful to establish the precise seat of the lesion. The point where the sound of regurgitation, or that of abnormal deglutition is heard, indicates where the lesion begins. And, in the course of the affection, auscultation answers very well to inform us of the amelioration as well as the progressive invasions of the lesion, by enabling us to ascertain the manner in which deglutition is performed.

In *limited œsophagitis* auscultation presents from the outset a peculiar sign, the sensation of a shock or jar communicated by the swallowed bolus at the moment when it reaches the diseased part. Whatever may be the cause of this sensation, whether it result from the impulse produced by an energetic contraction of the gullet at the moment when the mass swallowed reaches the painful spot, or whether it be due to an involuntary movement of the patient's body called forth by the pain, its indications are none the less significant. Here, still, the sounds of gurgling—of *glouglou*—and of regurgitation mark the stages of formation in the contraction.

In *acute inflammation of the œsophageal mucous membrane*, auscultation furnishes signs perfectly clear and characteristic. At the outset of the affection, there occurs during deglutition a constant regurgitation of small bubbles of air. There is a peculiar sound of continuous gurgling that is sometimes heard at a distance. In infants at the breast, when there is catarrh of the stomach, if we auscult while they are nursing, this sound of gurgling may be perceived coincident with hesitation in deglutition, provided the gullet participate in the gastric affection. When the lesions are more grave, an abnormal sound during deglutition may be perceived. It is difficult of description; but consists in a peculiar friction noise, which is distinguished by its hardness from the gliding sound of normal deglutition. When there is regurgitation of small portions of ingested matter, the true seat of the lesion may be estimated. If there have been vomiting, only the normal sounds are heard for a few hours after. In the adult, the slackening of the process of deglutition cannot be mistaken. These signs permit the diagnosis of lesions of the œsophagus in a great number of diseases—typhus, hydrophobia, syphilis, diphtheria, scarlatina, measles, variola, &c.

Under the name *spasmodic stenoses*, Dr. Hamburger describes two forms of spasmodic contraction—*stenosis spastica migrans* and *stenosis spastica fixa*. Auscultation in these cases takes cognizance of sounds analogous to those produced by organic contraction; and does not, therefore, of itself suffice for the diagnosis. It is simply an addition to the means of distinguishing spasmodic contraction. As to the differential diagnosis of contraction by compression and by alteration in the neighborhood of the gullet, auscultation does not appear to have furnished as yet important information.

The reviewer in the *Gazette* thinks the preceding data sufficient to show the importance of auscultation of the œosophagus. Bearing in mind that several writers have mentioned as remarkable and exceptional the sound of gurgling perceived during deglutition in patients affected with contraction of the œsophagus, it is easy to understand the utility of a method of exploration which enables us always to recognize this symptom. Besides, there is no doubt that further investigation may definitely fix the semeiological importance of the auscultatory sounds. Without attempting to underrate the value of the ordinary means of diagnosis, and in particular of catheterism, the utility is evident of a new mode of exploration, which is much more simple. It is destined to attract the attention of clinical observers.

From an article on "The Insane and their Management," in the London *Medical Times and Gazette*, we take the following extracts:—

"The proposal to increase the size of our asylums is most objectionable; they are already too large for efficient supervision and classification, their cost has been enormous, and there is good reason for believing that in them the percentage of recoveries has diminished rather than increased. On the other hand, whenever any evil attracts general attention in this country, we are pretty sure to have some panacea thrust upon us as being the one efficient remedy, and recently we have heard far too much of Gheel. The system there adopted has long been known in this country. Men interested in the cure of the insane have long ago considered it, and, everything being taken into consideration, it has been emphatically condemned. * * *

"The plan of forming insane colonies as at Gheel has been strongly advocated, but we are much more in favor of the cottage system as adopted in Scotland. As matters now stand, the labor of the insane pauper is not fully utilized. Most of them are capable of doing something; but they cannot be employed in many instances, because there is nothing for them to do. In the domestic life of the cottage there is always something to do—something which the patient can do; but it is essential that the care taker should be properly selected, and that his remuneration should be sufficient to make it an inducement for a respectable individual to receive a lunatic into his household. It is in these respects that the system has not perfectly succeeded in Scotland, as has been shown by Dr. J. B. Tuke. We further consider it of prime importance that patients should be separated; that they should not be farmed out in batches; above all, that there should be no colony, but that the separate patients should be well looked after by proper inspectors. And all this might be done at a smaller cost than each patient now implies, even excluding the interest of the money expended on buildings and grounds—a sum, by the bye, generally overlooked in asylum accounts. There will, however, be somewhat more difficulty in obtaining proper guardians for the chronic insane in England than in Scotland, for the average of education is decidedly lower among the agricultural population in the one country than in the other; and, of course, such a scheme implies a country residence, for chronic imbeciles of any class are sadly out of place in the bustle of town life. * * * * *

"A cry has been raised that lunacy has been made a specialty, and that it would be far better to take men from the rank and file of the profession to fill the post of superintendent. But who has made it so? The profession has not studied lunacy; until the other day there were no lectures delivered on the subject in any of our schools; even now there is no satisfactory text-book on lunacy in the English language; and, finally, where have the profession the means of studying the insane (which is something different from insanity) save in asylums? Reading and writing may come by nature, but the powers of administration necessary to conduct a large institution are not instinctive. Here, as in every other department of medicine, training is necessary, and, by rights, the training ought to come before a man is placed in authority. Had the same attention been paid to lunacy as to other departments of medicine, it would have been now on a far better footing, but those who have devoted themselves to the subject are not to be blamed because others have not done the same. When those morbid conditions which are associated with insanity are studied like other lesions, as a branch of ordinary medical education, the anomaly will cease."

Things not Generally Known.—The *Pharmaceutical Journal* publishes a remarkable instance of unforeseen danger arising from the facility with which oxide of silver is reduced by contact with vegetable extracts in common use. A medical man prescribed twenty-four pills, each containing two grains of the oxide of silver, a twenty-fourth of a grain of muriate of morphia, and a sufficiency of extract of gentian; the pills being coated with silver in the usual manner. The pills were delivered to the patient in an ordinary pill-box, but the lady, being in her nursery, and having no pocket in her dress, placed the box in her bosom, probably next the skin. In three-quarters of an hour a severe explosion occurred; her under-clothes were reduced to tinder, and her right breast was seriously burnt. The patient fortunately had presence of mind enough to seize the part with both hands, and thus extinguish the flame. We learn from Mr. Hills that a similar occurrence has been known in compounding the extract of colocynth with the oxide of silver, and that with creasote or oil of cloves this salt is reduced to the metallic state, with the production of heat amounting often to an explosion. In fact, many of the essential oils reduce the oxide of silver, and one of the processes for silvering glass is founded on the fact, oil of cloves being usually employed in the operation. We may mention that when glycerine and permanganate of potash come in contact, heat is evolved, sometimes resulting in flame. An instance has occurred in which a wound was covered with the glycerine of starch, and then sprinkled with powdered permanganate of potash, when the heat produced became unbearable.—*Lancet, March* 26, 1870.

On the Use of Buttermilk in Rearing Infants.—Dr. Ballot, of Rotterdam, in the *Med. Times and Gazette*, March 26th, 1870, recommends buttermilk as a food for infants. He says that it is easily digested, on account of the presence of lactic acid. This food is prepared thus:—To a pint of buttermilk is added a spoonful (0.16 gramme) of wheat flour, and eight or ten decigrammes of sugar. When the child has diarrhœa rice meal may be added instead of wheat flour. It must be kept boiling some minutes. The best mode of administration is in combination with suckling—say twice a day—beginning with very little, gradually increasing the quantity. The food must be administered warm (96° Fahr.), which is done by putting the bottle in hot water. The best time for administering it will always be when the baby takes a longer sleep—as in the morning, after it has been refreshed, and towards night, at six or seven o'clock, when it is put into the cradle. It is to be administered in all cases where the mother has either not milk enough for the baby, or is rather feeble, and is either unwilling to take a nurse or has no means for it. The child to whom buttermilk is to be given should be healthy. Another great advantage of buttermilk in addition to mother's milk is, that the illnesses that often occur when the children are weaned are mostly avoided.—*Physician and Pharmaceutist.*

Treatment of Orchitis by Blistering. By J. G. Cooper, M.D.—Having recently seen articles in the medical journals describing Jordan's treatment of orchitis by blistering the scrotum with nitrate of silver, I am reminded of a case treated by me in 1860, when attached to the army, and travelling up the Missouri river.

A young officer had just contracted gonorrhœa of the virulent type prevailing among the Indians. It being a fresh case, and the first attack, I thought it a fit one for the so-called "abortive" mode of treatment. I therefore injected at once a strong solution of nitrate of silver, taking good care to prevent it from passing farther back than the scrotum. The pain caused was intense for some hours; but the desired effect of destroying the virus was not produced, for soon after violent orchitis came on, either from the natural course of the disease or from its being "driven back," literally or metaphorically. This new inflammation was so severe as to deprive the patient of rest and almost of reason, while the necessity of his very soon taking the saddle made it important to act energetically. Fearing the delay required by the usual modes of treatment, I decided on counter-irritation as the quickest, and having none of the more rapid vesicants at hand, applied the Emplast. Canthar. 4 x 4 inches, on the inner surface of each thigh near the groin. As soon as vesication commenced the orchitis began to subside, and in a few hours was quite relieved and did not return. I may add that the vesication extended to a considerable part of the scrotum, but I had no doubt that the more distant blistering was the cause of the relief experienced.

The gonorrhœa returned, and was treated by milder means with success. The officer afterwards served in the war, but whether any ultimate effects followed the disease, I have never ascertained.—*Pacific Medical and Surgical Journal.*

Medical Miscellany.

Mr. Editor,—For fear Dr. Jones, our Secretary, may forget to send you the following resolves passed at our annual meeting holden in Kingston, to-day, I forward them, asking their insertion in the Journal, if you think best.

Resolved, That our delegates to the American Medical Association be instructed to use their influence to prevent the adoption of any regulation based upon caste or color.

Resolved, That in the opinion of the members of the Plymouth District Medical Society, "all persons,* wherever graduated, presenting themselves as candidates for admission to the Massachusetts Medical Society, should undergo a satisfactory examination before the Censors of the district in which they reside. And that our Councillors be instructed to use their influence to bring about a change to this effect in the laws of the Massachusetts Medical Society."

Resolved, That in the opinion of the members of this society, the frequent procuring of criminal abortion by *persons practising medicine* in this commonwealth, demands the serious consideration and action of the Massachusetts Medical Society.

Yours, &c., A. Millet.

Bridgewater, *May* 11, 1870.

At the Annual Meeting of the Plymouth District Medical Society, held at Kingston, May 11th, 1870, it was

Resolved, That in the opinion of the members of the Plymouth District Medical Society, the frequent practice of procuring criminal abortion, by persons practising medicine in this commonwealth, demands the serious consideration and action of the Mass. Med. Society.

Voted, that a copy of these resolutions be presented to the parent society.

H. N. Jones,
Secretary Plymouth Dist. Med. Society.

Prof. C. L. Ford, of the Long Island College Hospital, Brooklyn, N. Y., and who has been long and favorably known as a distinguished teacher of anatomy in this country, left on board the Marathon for Europe on the 21st inst. He expects to return in time for his next course of lectures.

Phenic Acid in Smallpox.—MM. Chauffard and Douillard state that they have derived great advantage from the administration of large doses of crystallized phenic acid at an early stage of confluent variola. From seven to fifteen grammes are administered *per diem*, and this dose has been continued for eight or ten days without inducing any ill effects. On the contrary, it cuts short the secondary fever and suppuration, usually so fatal in confluent smallpox. A tonic regimen is followed, and lotions of phenic acid diluted in from 50 to 100 parts of water are also applied to the face and hands.—*Union Méd.*, *April* 5 and 7.

Medical Women at Vienna.—The *Wien Med. Wochenschrift* states that at present there are only two medical women in Vienna, an Englishwoman and a Swiss. The former has been a most industrious attendant upon the syphilitic division of the Hospital, and the other, who is laying herself out as an operator, recently assisted an interne in a case of castration.—*Ibid.*

If the Publishers of the Dublin *Medical Press and Circular* would place the letters "U. S. A." after *Boston*, which now stands alone on the envelops of their weekly exchange for us, it would secure our direct reception of their valuable periodical, and save the Postmaster at the English *Boston* the trouble of remailing the numbers.

Errata.—In the last number of this Journal, p. 381, lines 35-36, for "by falsely asserting that the majority report was adopted," &c., read *by falsely asserting that the majority report was unanimously adopted*, &c.

In the "Mortality of Massachusetts" report in last week's Journal, the number of towns in the heading and the date were incorrectly printed.

To Correspondents.—Communications accepted:—Reflex Contraction of Bloodvessels.

Pamphlets Received.—Three Cases of Imperforate Anus, with Remarks. By J. H. Pooley, M.D., Yonkers, N. Y. Pp. 20.

Married,—In this city, 17th inst., Dr. William M. Ogden to Miss Margaret W. Greene, both of Quincy.

Died,—In Peacham, Vt., March 27th, Dr. William Harvey, aged 37 years.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending May 21, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases.	
		Consumption.	Pneumonia.
Boston	96	12	9
Charlestown	10	2	0
Worcester	17	5	1
Lowell	16	5	1
Milford	5	1	0
Chelsea	7	3	1
Cambridge	7	2	0
Salem	9	4	0
Lawrence	8	1	1
Springfield	13	3	0
Lynn	8	1	0
Fitchburg	2	0	0
Newburyport	7	1	0
Somerville	7	1	1
Fall River	9	1	1
Haverhill	7	2	3
	228	44	18

From all the above-named places there are reported five deaths from scarlet fever, five from typhoid fever, and four from measles. George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending May 21st, 96. Males 53—Females 43.—Accident, 1—disease of the bladder, 1—inflammation of the bowels, 3—disease of the brain, 8—inflammation of the brain, 1—bronchitis, 6—canker, 1—cholera infantum, 1—consumption, 12—convulsions, 2—debility, 3—diarrhœa, 2—dropsy of the brain, 3—drowned, 1—dysentery, 1—scarlet fever, 4—gangrene, 1—gastritis, 1—disease of the heart, 5—intemperance, 2—disease of the kidneys, 3—congestion of the lungs, 3—inflammation of the lungs, 6—measles, 1—old age, 3—paralysis, 3—peritonitis, 2—pyæmia, 3—rheumatism, 1—suicide, 1—unknown, 9—whooping cough, 2.

Under 5 years of age, 33—between 5 and 20 years, 9—between 20 and 40 years, 25—between 40 and 60 years, 12—above 60 years, 17. Born in the United States, 66—Ireland, 21—other places, 9.

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* Med. and Surg. Journal, vol. v. p. 338.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

New Series.] Thursday, June 2, 1870. [Vol. V.—No. 22.

Original Communications.

A FRAGMENT OF THE MEDICAL HISTORY OF BOSTON.

Mr. Editor,—The accompanying fragment of the Medical History of Boston was received from my medical instructor, Dr. William Johnson Walker, of Charlestown, Mass.—a gentleman distinguished as a physician and surgeon, whose munificent gifts and bequests to various literary and scientific institutions of Massachusetts amounted to nearly a million of dollars.

The following endorsement by Dr. Walker is sufficient evidence of the authenticity of the paper. With the hope that it may find a place entire in your Journal,

Respectfully yours, Morrill Wyman.
Cambridge, May 5th, 1870.

"This is a copy of an account in manuscript of the medical men of the times spoken of, given to his friend by Dr. Ephraim Elliot, a pupil of Dr. Isaac Rand.

"Dr. Rand was a distinguished scholar and physician of Boston, resided in Atkinson Street, and died at a very advanced age about the year 1820. Dr. Elliot devoted himself to the druggist business, and was highly esteemed for his probity, education, intelligence and moral worth. This copy came into my hands through Dr. Choate, who left Boston some eighteen years since [about the year 1840], and has since resided in Illinois. I have seen the original, then in the custody of Dr. Elliot's son. At my last interview Mr. Elliot told me Josiah Quincy, senior, had sent for and borrowed it, and engaged to return the same to him.

"Wm. J. Walker."

Medical Sketches, by Dr. Ephraim Elliot, of Boston, Mass.

Biographical Sketches of the Physicians of Boston at the time of the American Revolution. Incorporation of the Massachusetts Medical Society. Medical Club. Medical Fees. First Course of Anatomical Lectures, by Dr. John Warren. Establishment of the Medical School of Harvard University. The Massachusetts Medical Society the Legal Guardian of Medical Education. The Censors reject two of Dr. Warren's Students. The Students attend a Course of Lectures at Cambridge, and are examined in public; are re-examined by the Censors and passed. The College confers the Degree of Doctor of Medicine upon George Holmes Hall and John Fleet.

In August, 1780, I commenced the study of physic under Dr. Isaac Rand's direction. The physicians of Boston had diminished in their number, in consequence of hostilities between Great Britain and the colonies, in 1776. Many of those who then did the business of the town, being royalists, had left it and had joined with others who went to Nova Scotia or Great Britain, under British protection. Their places were not filled, the inhabitants of the town being reduced to about fourteen or fifteen thousand in consequence of the war. The medical gentlemen were of very eminent character. For instance, Dr. Sylvester Gardner, whose reputation was high as an operator in surgery, and he did also the largest business as a druggist of any person in Boston. Dr. Nathaniel Perkins, who was supposed to attend a greater number of patients as a physician than any other practitioner in the town. William Leo Perkins, who was respectable as to business and reputation. Dr. John Jeffries was gaining in the esteem of the public, and valued as a man of promise in the profession. These are all who are now recollected by me, being then a school boy only. Their characters I have since learned from those who knew them. Add to these Dr. John Sprague, who had retired on an ample fortune, whose practice had been larger and who had a confidence placed in him which followed him in his retreat, and he was sent for and consulted by the physicians here for many years. Dr. Philip Godfrey Kast and Dr. John Perkins were very old men, and had retreated from practice on that account. Dr. Miles Whitmarsh had won a respectable share of practice. He was unfortunately the attending physician at the Gaol in 1775. The wounded prisoners from Bunker's Hill were thrown into the common prison, and provided with little better than gaol provisions. They suffered and some died ; in particular, Lt. Col. Gardner, or Parker,* a very respectable man. Much was the blame laid on the Doctor, whether justly or not is dubious. He remained in Boston, was neglected, and died in 1778. Dr. Joseph Warren's practice was large and increasing, when he lost his life and immortalized his name. Dr. Benjamin Church was gaining practice among the whig interest, but for reasons that are sufficiently known he was banished from the country. Many others and perhaps eminent characters, may have flourished, but from my age and juvenile associations I dare not attempt to enumerate them.

When I commenced my professional studies I found the following gentlemen doing the business of the town, viz. : beginning at the south, Dr. Benjamin Curtis, who was employed there considerably. Dr. John Warren, whose character and qualifications have been sufficiently known, practised till a few years since, when he died. Dr. Charles Jarvis, who stood high in rank, and deservedly. His practice would doubtless have been large, if he had not chosen to devote himself to political life, which prevented him from attending to his profession as was desired. The style of a gentleman which marked his conduct in the chamber of the sick, and the tender sympathy which he evinced when attending to his surgical practice, endeared him in a peculiar manner to his employers. Dr. Joseph Gardiner was employed both as a physician and surgeon, probably more than any other gentleman in the profession. He pretended that he looked upon learning as superfluous, that the bedside was the only school for the physician ; but he *did* study, and was a more learned man than he chose to appear. He was witty and satirical, and very greatly esteemed. Dr. Joseph Whipple was taken under the protection of Dr. Gardiner, and was rising into notice. Dr. Nathaniel Appleton was a most amiable man, but was too diffident to show his real worth and abilities, which were very far above mediocrity. Dr. Thomas Welsh ought to take rank as an older physician than the two last gentlemen. He was then in the incipient state of his business, having been engaged in the American army for some years. Dr. James Lloyd was ranked high in the profession. He took the lead in regard to the practice of surgery ; was the first who introduced the male practice of the obstetric art as a general appendage to the office of a physician ; was very successful in it, and consequently greatly esteemed among the ladies. He entertained a great deal of company, kept a genteel equipage and a suit of servants. His horses were esteemed equal to any in the town. He was a *gentleman* of the *old* stamp, and deservedly respected and valued. He observed to a near and valued friend of mine, in regard to his practice in the lying-in-chamber, "I never in my life refused to attend a call, even to the poorest class of society, in these cases which often require immediate assistance. If there was only a bed of straw, I saw that it was beaten up and rendered as easy and comfortable as was possible, and, with my own arms, invariably laid the delivered woman upon it, and, I assure you, sir, I have been amply paid by the esteem and affection of my patients."

Dr. Thomas Bulfinch had a good share of very genteel practice, and lived in good style. He kept a chariot, was very tender and affectionate, and greatly valued by those who employed him. Dr. Bulfinch declined joining the Medical Society.

Dr. Samuel Danforth was then rising to an eminence in the profession which has not been exceeded in Boston. Setting theories aside, he formed one of his own ; he endeavored to enlist no man, but he persevered in it himself till he acquired a very great confidence in his judgment, and was probably consulted in more cases than any other physician of his day. He is now living, and people hold on to his judgments, though his abilities are obscured by age and infirmities, and he is but a shadow of what he was.

Dr. Isaac Rand was one of the most learned men of his day ; being much of a mathematician, he was seeking for something like demonstration, on which to lean in his profession. For want of it, he was always dissatisfied, and probably read more books than any physician among us. He was apt to pin his faith on *the last book*. He was, however, a successful practitioner, had a discriminating judgment ; was a good surgeon, and remarkably neat in his operations. Dr. Thomas Kast had a large practice among the lower and middling class of people, with whom he was a great favorite. He accumulated much property, making every one pay him something, and being an economist he turned it to much advantage.

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* Lieut.-Colonel Moses Parker, of Chelmsford, Mass., was in Col. Bridge's regiment, and was wounded by a ball which fractured his knee. He was left in the redoubt, carried a prisoner to Boston and placed in the gaol; then his leg was amputated, and he died July 4th, aged 43. Mr. Frothingham says of him, "he was a skilful and brave veteran of the French war, and behaved with great gallantry in the action."

I do not recollect any other regular physician. Being war time, many were coming and going who were attached to the army and navy, and to numerous privateers ; but they were birds of passage, and though here to-day, were gone to-morrow.

The gentlemen I have noted were all respectable men of society, and had the best advantages the country could afford. Many of them had spent a part of their time in Europe, and attended practice in the hospitals of London, Edinborough, &c.

To the credit of the country, *there was not a quack or empyrical physician in this place.* Such persons were always frowned upon by the people, and soon hid themselves. The only one I recollect who had got a footing here, was a German named Jeorleus. It was said he had been a dresser in the British Military Hospital in Quebec. He removed into Boston, and got some business among the Dutch inhabitants and their posterity. He was never acknowledged by the physicians as a brother, but he dressed a wound and applied a bandage with great despatch and neatness. I never knew him to perform an operation; and he was thought to be a very ignorant man.

These, excepting the last, were the persons who petitioned for the incorporation of the Massachusetts Medical Society. The plan was enlarged, and many eminent men in different parts of the Commonwealth were added. They first met in 1781 or 1782, and chose their officers, and have regularly done so at stated times to this day.

At this time great difficulties were experienced by professional men in consequence of the fluctuating situation of the old continental money. It was constantly depreciating ; and although handsome charges were made, the amount realized on collections scarce afforded a living. In consequence of this the physicians instituted a club, which met at the Green Dragon Tavern ; the immediate object was to alleviate the difficulties consequent on the fluctuation of the paper money. Physicians' fees had been very small. By recurring to Dr. Rand's books, I found the fee for a visit at his first commencing business, was one shilling, sixpence. It was afterwards increased to two shillings. Dr. Lloyd, and perhaps some others, demanded half a dollar, but their practice was among such as were in high life. Midwifery was at a guinea. Capital operations about the same, and the patients were charged with after-dressings as visits. The first fees established by this Medical Club were half a dollar for a visit; if in consultation, a dollar; rising and visiting after 11 o'clock and previous to sunrising, a double fee. Cases in midwifery, eight dollars ; capital operations in surgery, five pounds lawful money ; reducing a dislocation or setting a fractured bone, one guinea ; small operations in surgery, according to circumstances ; bleeding and opening abscesses, half a dollar ; extracting a tooth the same, if the person called on the doctor ; if not, a fee for a visit was added. The advance on medicine found for patients, though bought of an apothecary, was enormous, often amounting to three or four hundred per cent. All accompts were to be calculated and kept in hard money ; and the exchange, if payment was made in paper money, according to such agreement as could be made between the parties.

The profession was much benefited by these regulations. The physicians became acquainted with each other—party politics were dropt at the meetings—but oil and vinegar will not unite. *They did not love each other*—and all were determined to put down Warren—but they could not, he rose triumphant over them all.

One night Dr. Rand returned home from one of those meetings, and addressing himself to me he said, "Eliot, *that* Warren is an artful man, and will get to windward of us all. He has made a proposition to the Club, that, as there are nearly a dozen pupils studying in town, there should be an incipient medical school instituted here for their benefit—and has nominated Danforth to read on Materia Medica and Chymistry—proposed that I should read on the Theory and Practice of Physic ; and some suitable person on Anatomy and Surgery. *He* was immediately put up for the latter branches ; and after a little maiden coyness, agreed to commence a course. As he has many operations and surgical cases in the Continental Hospital, of which he is sole director in every respect, and as he can always have command of subjects for dissection without exciting alarm, or being reduced to the necessity of taking bodies from the burying-grounds, as most of the inmates of the hospital were foreigners, and no one would scrutinize into the matter, I would have you attend the lectures, which would also save me the trouble of dissecting with you in order to qualify you for a surgeon. Danforth declined, as it was not possible to command a chymical apparatus—and as to myself, who would want to hear an uninteresting course of lectures on fevers and consumption! so I followed his steps. Now Warren will be able to obtain fees from the pupils who will attend his lectures on anatomy and surgery, and turn it to pecuniary advantage; but he will not stop there. He well knows that moneys have been left to the college for such an establishment as he has been appointed to, and he is looking at the professorship. *Mark what I say, Eliot, you will probably live to see it verified.*" Thus Rand, evidently chagrined.

At the proper season, Dr. Warren read a very excellent course of anatomical lectures, with demonstrations, and exhibited the various operations of surgery. It was renewed the next year.

The fulness of time having come, the Corporation of Harvard University began seriously to think of setting up a medical institution. At first, the improvement of Dr. Hearsey's legacy was deemed a sufficient foundation, but on the suggestion of the friends to that seminary a more enlarged plan was determined to be adopted. A professor of chymistry and materia medica; a professor of anatomy, physiology and surgery; and one of the theory and practice of physic, were to be established. But professors were to be sought. A professor of anatomy and surgery, eminently qualified, could be obtained at once. For the other branches, it required reflection. It was suggested that Dr. Aaron Dexter, who had attended the practice with Dr. Danforth, the most scientific chemist then on the stage, could easily qualify himself for a chymical professor. Dr. Waterhouse had recently arrived in Boston, or was expected in a short time. He had spent some years in London, and had completed his education in Leyden, was relation and pupil of the excellent Dr. Fothergill, of London, who, it was said, had contemplated such an establishment at this University; and although he had died, it was also reported that Dr. Lettsom had succeeded to much of his business, and meant to fulfil his benevolent intentions. This was only a gossipping story; but was believed, or rather hoped for, by many persons. Dr. Waterhouse was, therefore, determined upon for the other professorship. According to the request of Dr. Hearsey, his professor was to be resident in Cambridge, and there was no provision for a division of the legacy. It was to be for the benefit of a professor of physic and surgery, but by an arrangement with the heirs of Dr. Hearsey, it was consented to that Waterhouse should reside in Cambridge, the income to be divided in proportions to be determined upon between Warren and Waterhouse.

Major William Erving, a Bostonian, and relation to Gov. Bowdoin, who had been in the British service from his youth, but had retired therefrom, having been much acquainted with Dr. Dexter, died in good time, and left an income to the chymical professorship. It was presumed that the attending students on the medical establishment would make up a sufficient gratuity to render it an object to the several gentlemen who had the appointments.

The Massachusetts Medical Society had authority to examine such candidates for the practice of physic as should offer themselves for the purpose, and grant diplomas signifying such persons as they found to be qualified for the profession; but they had no power to give degrees. The medical professors had similar powers, and were quite independent of the Medical Society. The University could give degrees, and confer titles upon such as passed examination before their professors. Here it was supposed there would be some clashing of interests. The number who had been examined by the Censors of the Society was not great. It was not long before the two institutions were at issue. None had been examined by the University; and no degrees but such as were honorary had been granted.

About the year 1788, George Holmes Hall and John Fleet offered themselves for examination to the Censors. Dr. Oliver Prescott, of Groton, Drs. Lloyd, Gardner, Danforth and Rand were then in the office—a formidable host! The candidates were students in Dr. Warren's surgery; had dissected much, and probably were far better qualified than any who had presented themselves. In fact, the Dr. had bestowed great pains in regard to their qualifications. Dr. Prescott, being hard of hearing, said nothing; and I think Danforth's business prevented his attendance, but he heartily joined in putting them down. It was judged that now was the time to mortify their instructor. Various times were appointed for attending to the business, and it was as often postponed; till the young gentlemen actually became confident that the Censors, sensible of their own deficiencies, were afraid to encounter them. At length the time came, and they found it a fiery trial. They then became convinced that all knowledge was not shut up in the brains of the professors. They were set aside, and could not obtain certificates.

Here the Censors thought the matter would drop, but they were mistaken. Dr. Warren was neither mortified nor foiled. He had wished for an opportunity of commencing the examination at Cambridge. This was a *good* opportunity. Lectures were immediately begun and got through before Commencement. This was an unexpected matter, and measures were taken to prevent its having effect. President Willard was applied to, to put a stop to the progress of the professors, lest it should generate serious misunderstandings between the two Societies. Dr. Rand called upon me, and desired me to prevail upon Dr. Fleet to suspend the matter; assuring me that the Censors would make such representations as would effectually prevent him from getting into business, and that both he and Hall would be ruined. I was applied to as I was like to and did become his brother-in-law; but I had no influence over him, and declined any interferences.

A public examination was held in the Philosophy Chamber of the University, at which many persons not of the profession attended. The candidates were thoroughly sifted, and afforded much gratification to all present.

On the Saturday previous to commencement, notice was sent that the Censors would meet for their re-examination. They attended—when a few questions were asked and they were passed.

On commencement day, not having been informed of this matter, a feeble attempt was made by some of the overseers that the degree of Doctor of Physic should be withheld. Having been informed of the re-examination, opposition was withdrawn, and George Holmes Hall, who received the degree of Master of Arts in 1781, and John Fleet, Ad Eundem, in 1788, were admitted the first in course to the degrees of Doctor of Physic.

This, it is believed, has been the only interruption that has taken place between the societies; and they have mutually contributed to the reputation of each other, and have each done their part to raise the respect of both to their present high standing among the literary institutions of the country.

Mr. M. Foster, F.R.C.S., reports in the *Lancet* a recovery from traumatic tetanus under treatment by inhalation of nitrate of amyle, five drops of which were inhaled at each occurrence of a spasm.

CASE OF CONGENITAL MALFORMATION.

By R. K. Clark, M.D., South Hero, Vt.

The subject is a boy now in his fifth year, and resides in this town. The right hand is cleft to the wrist-joint, and has only a thumb and third finger. He has good use of these, and can pick up a pin or any small article as readily as a child with a natural hand. On the left hand there is a thumb and three fingers; the second finger, with its metacarpal bone, is wanting, and this hand, like the right, is cleft to the carpus, and has the appearance of having been removed by a surgeon.

The lower limbs of the child are normal to the knees. On the right there appear to be two knee-joints, one nearly in its normal position; the other, and the one to which the leg is attached, is on the inner condyle of the femur. Each has a patella. The bones of this leg are rather shorter than normal, and the lower extremity of the tibia is prominent and blunt, with no external malleolus. On the side of the fibula, about one and a half inch from the end of the tibia, is a foot, with its plantar surface towards the knee. On this foot the great toe is united to the next toe. Of course, this leg is worse than useless to the child. The left leg is normal to the foot, where the deformity of talipes varus exists.

The child's general health is good. He could creep as early as most children, and now walks on his knees, getting around the house readily. If, when at play with other children, he is hurried, he runs quite rapidly on his hands and knees. Mentally he appears brighter than most children of his age.

The father of this child lost an arm in the late war, got his discharge, and came home. He was soon after married, and in due time this child was born. The mother often dressed the arm that had been amputated, and it worried her to see her husband learning to work with one arm. With them, the neighbors and others who called at their house, a common topic of conversation was about wounded soldiers and surgical operations, sometimes to the annoyance of the mother. What influence, if any, these circumstances had in producing the malformation in question, I leave for the curious to inquire into. I simply give these facts as connected with the history of the child.

NORMAL POSITION OF THE UTERUS.

Translated by HENRY TUCK, M.D., Boston.

THE following remarks are the conclusion of an elaborate article in the last number of "*Archiv für Gynakologie*" of Berlin on the normal position of the uterus, by Carl Credé, of Leipzig.

1. Ante-flexion in a varying degree is the physiological condition of the uterus in nearly half of all women.

2. The uterus has its correct physiological position, which is exactly perpendicular to the floor of the pelvis, only in a third of women.

3. Retro-displacements of the uterus, as retro-flexion and retro-version, are the rarest forms of displacements, and therefore of the most pathological importance.

4. Versions and flexions of the uterus, which can be called physiological in half the cases, are very slight.

It is to be strongly hoped that more numerous and more exact observations will confirm these results of our own researches.

The modern mechanical treatment of versions and flexions of the uterus has far outstripped anatomical and physiological observations, and has, according to our deliberate and unprejudiced decision, indecently overstepped its proper limits.

As we are convinced that ante-versions and flexions are normal positions of the uterus, that the pathological conditions accompanying these are essential, and that these displacements are of no importance, we hope that the at least superfluous and in many cases dangerous mechanical intra-uterine treatment with probes and pessaries will be in great part abandoned, and such a course will certainly benefit the women.

Only where the ante-flexion is extreme, so that the escape of fluids from the uterus is prevented, and we have symptoms (often due also to narrowing of the cervical canal), of menstrual colic, retention of mucus and blood, sterility, &c., is there any indication for the repeated reposition of the uterus, or an operation for enlarging the narrowed cervix, measures sometimes of the greatest benefit.

But, for ante-displacements, vaginal and intra-uterine pessaries are mostly quite superfluous.

On the contrary, in cases of retro-version, and especially retro-flexion, there is full justification for mechanical treatment.

Here, however, first remove all attendant complications, for in many cases after the cure of all such complications, in spite of retro-displacement persisting in a greater or less degree, the former bad symptoms of any importance disappear.

In such cases all preliminary mechanical treatment can at least be dispensed with.

ACCOUNT OF SIR JAMES SIMPSON'S LAST ILLNESS. AUTOPSY.

OUR English exchanges come to us filled with memoirs of Dr. Simpson. We gladly give space to the account of his last illness, communicated by a medical friend to a local paper, and copied thence into the *British Medical Journal* of May 14, 1870. The account of the autopsy is from the pen of Dr. John Chiene. "Three years previous to his last illness, a severe attack of rheumatism left him with an enfeebled circulation. He had obeyed an unusual number of summonses to distant parts of the country in the beginning of the year; and, indeed, for nearly a fortnight before his illness, almost his only sleep was in a railway-carriage. He was summoned up to London early in February last, to give evidence at the Mordaunt trial. In consequence of the delay in the transmission of a telegram, he had to make the journey twice. He suffered severely from the intense cold on the way home, and had to confine himself to bed at once on his return, being alternately shivering and feverish. On the Monday following, he struggled up to the University and delivered his last lecture. With difficulty he reached his house, which he was never to leave again in life. Rheumatic pains, principally affecting the muscles of the chest and arms, set in, and caused great suffering. They, however, yielded to treatment at first, but the symptoms returned after a short interval, complicated with fits of dyspnœa and intermission of the heart's action. The attacks of breathlessness soon became less severe; but the action of the heart still evidenced increasing weakness, as shown by dropsy of the lower limbs.

"For a time, diuretics and stimulants gave hopes of relief and recovery; but the Saturday previous to his death the system ceased to respond to stimulants, and began to flag. On Wednesday, the intelligence began to be clouded, the heart not sending sufficient blood to the brain. From this time he gradually sank, without exhibiting any sign of consciousness, until he expired at ten minutes to eight, P.M., of the 6th of May, 1870."

"*Sectio Cadaveris* of the late Sir J. Y.

Simpson, Bart., at 52 Queen Street, Edinburgh, on Sunday, May 8th, 1870, at 2.30, P.M.; forty-three hours after death. The *post-mortem* examination was made by Dr. J. Bell Pettigrew and myself, in the presence of Drs. Andrew Wood, Warburton Begbie, and Moir; and Dr. Munroe, Sir James Simpson's assistant. The following facts were ascertained. The body was well nourished. Decomposition was commencing in the neck and upper part of the chest. The dura mater was adherent to the skull cap. There was subarachnoid effusion. After reflecting the scalp, the following measurements of the skull were taken:—circumference round by occipital protuberance and below frontal eminences, 22½ inches; from ear to ear, 13 inches; from occipital protuberance to point between superciliary ridges, 13 inches. The weight of the entire brain (cerebrum and cerebellum) was 54 ounces; the weight of the cerebellum, the pons, and medulla oblongata, was 5¼ ounces. The convolutions of the cerebrum were remarkable for their number, depth, and intricate foldings. This was noticed more particularly in the anterior lobes and the islands of Reil. The brain substance was congested, otherwise healthy. There were atheromatous deposits in the arteries at the base. The pericardium and anterior mediastinum were loaded with fat. The heart weighed 18½ ounces; it contained no clot; it was enlarged, flaccid, and pale. Both ventricular cavities were enlarged. The muscular walls of the right ventricle in some places were almost entirely replaced by fat. The tricuspid and pulmonary valves were healthy. There was atheromatous deposit in one of the cusps and in the aorta, which was somewhat enlarged. In the ventricular septum, close to the apex, there was an aneurismal sac, of the size of a pigeon's egg, communicating by a large opening with the cavity of the left ventricle; it was filled with firm fibrinous coagulum, which projected into the ventricular cavity through the opening. The lungs, liver, kidneys, and spleen, were deeply congested, with indications in all of extravasation of blood (apoplexy)."

Elsewhere, in the same Journal, we find an allusion to the weight of Dr. Simpson's brain, in which, after calling attention to the fact that Cuvier's brain weighed 64 ounces, and that of Dr. Abercrombie 63 ounces, the writer says:—"Sir James's brain, whilst much above the average, did not nearly reach those of the celebrated men we have mentioned; but, at the same time, the convolutions were remarkably numerous; they were, says a correspondent, twisting and twining round on each other, as if they could not find room within the head. The island of Reil was very wonderful."

Reports of Medical Societies.

MASSACHUSETTS MEDICAL SOCIETY.

Proceedings of Evening Meeting, concluded.

Dr. R. L. Hodgdon, of Arlington, in behalf of the delegates appointed to represent the Massachusetts Medical Society in the meeting of the American Medical Association, recently held at Washington, D. C., offered a report, by which it appeared that a protest had been made against the admission into that Association of the delegates from the Massachusetts Medical Society by certain physicians from Massachusetts, and, in conclusion, stated that as the protest was wholly unexpected, no one was prepared to meet the deliberate and premeditated attack of the parties supporting the accusation, who came to Washington with the apparent intention of bringing the Society into disrepute. Therefore they recommended to the Council to appoint a committee of five Fellows of the Society to consider these matters, by giving a hearing to such members as the committee might deem expedient, and to report at the next regular meeting of the Council if any action upon their present report is necessary to the welfare of the Society.

Dr. Sullivan, of Malden, rose to correct alleged misrepresentations; the protest was from a society, and not from individuals, as stated in the report of the delegates just read, and notice of it had been given in the Journal of that Society months previously. It was *voted* that so much of the report as referred to the appointment of a committee be accepted, and that the whole matter, with all the papers from the delegates, and from Dr. Sullivan, be reported to that committee.

In accordance with the above vote, the committee of five was appointed.

Proceedings of Annual Meeting, concluded.

At the latter part of the meeting on Tuesday, Dr. Bundy, of Boston, offered a resolution, which, having been amended by Dr. H. R. Storer, passed as follows:—

Resolved, That the Massachusetts Medical Society hereby expels from fellowship all those who publicly profess to practise in accordance with any exclusive dogma, whether calling themselves homœopaths, hydropaths, eclectics, or what not, in violation of the Code of Ethics of the American Medical Association.

At one o'clock, the members of the Society listened to the Annual Discourse, delivered by Dr. W. W. Wellington, of Cambridge. The orator took for his subject, "Modern Medicine, its needs and Tendency."

Alluding to the spirit of inquiry which characterized the present age, and the radical tendency of the times to look *into* things instead of *at* them, he said that this tendency affected the science of medicine, which was perhaps the most open to attack of all the sciences. It was passing through an ordeal more severe than it had ever before bexperienced. While on the one hand it was enriched as at no former time by the contributions of science, on the other, its theory and practice are the subject of the most severe criticism. The manner in which the profession was considered by the community at large was not such as could be wished. Physicians from time immemorial had been considered as subjects for the ridicule and sarcasm of poets, dramatists and novelists. In the popular estimation, all who pretend to practise medicine—the regular, irregular and defective—were grouped together and regarded as composed of rival sects, each anxious for the mastery. And it was not surprising that physicians occasionally indulged in complaints of the injustice and stupidity of mankind. The profession still held a high place in public regard, notwithstanding the shafts of ridicule. Satire was the fate of many a good man and many a good cause.

If there was any doubt in the public mind as to the efficiency of the profession, it might be well to consider carefully the methods of medical practice. Mention was made of the recent discoveries and improvements in the several departments of medical science. Therapeutics had not kept pace with the other branches of the science, and the confused state in which this department was found was due to the loose methods of practice in administering drugs. The great need of the medical profession was clinical study, and special effort was necessary in this direction, and clinical research was the required work in modern medicine. Over-medication had been the great besetting sin of the profession. Kind nature should be allowed to do her work with as little trifling as possible. Modern views of the nature of disease must modify modes of treatment. Diseases that could be cut short or broken up by medicine were few in number and might be counted on the fingers. With less confidence in drugs and more skill in their use, and with increased skill in the diagnosis of disease, the profession might hope for advancement, but while the elements of disease surround on every hand, and the earth, air and waters were full of matters deleterious to health, the annihilation of disease could not be hoped for. Neither should there be wonder at the multiplicity of diseases, or despair in using the methods of cure. Considerable space was devoted to methods of treatment which had become obsolete, such as the frequency of bloodletting and blistering. Mercury, too, had lost its once potent sceptre. The tendency of modern practice was also shown in the increased attention paid to the subject of dietetics. People, especially the sick, were better fed than formerly. In view of the great advance made in the last half century, and the added means at their command, the profession should thank God and take courage.

In conclusion, he alluded in fitting terms to those who had died during the year.

At the completion of the discourse, the retiring President introduced his successor, Dr. Samuel A. Fisk, of Northampton, in the following words:

Gratefully acknowledging, gentlemen, the many testimonials of your regard, I proceed to discharge my last official duty in introducing to you my successor, and I most earnestly express the assurance that the honor conferred on him will be repaid with interest. I have the pleasure to present Dr. Samuel A. Fisk, of Northampton.

The Society then adjourned to the upper hall, where tables had been spread by Mr. J. B. Smith for the annual dinner. The divine blessing was invoked by Rev. Phillips Brooks. After the repast, the audience was called to order by the Anniversary Chairman, Dr. George H. Lyman, of Boston, who addressed his professional brethren as follows:—

GENTLEMEN OF THE MASSACHUSETTS MEDICAL SOCIETY,—By appointment of your Councillors, it becomes my pleasant duty to bid you a hearty welcome to this our 89th anniversary.

I find, by reference to the earlier records, that, for many years, it was no unusual thing for the business meetings to be adjourned for want of a quorum. In 1796—seventy-four years ago—the brilliant idea of dining together seems to have been suggested—by whom it is not stated, perhaps by the venerable Holyoke himself, who was then President, and the prolongation of whose life to 100 years would seem in itself to indicate a tender regard to the state of his digestive organs; at all events, it was then voted that a dinner should be provided for the annual meetings. From that period there seems to have been no lack of prompt attendance, and the former melancholy record is superseded by the more frequent and agreeable one of adjournment to Vila's Tavern.

The idea seems to prevail among many persons that doctors are a kind of incorporeal animal, to whom eating and sleeping are wholly unnecessary. If it be true that the physician in active practice catches, at times, his food and his sleep on the wing, we may, with all the more reason, avail ourselves of the right in our *corporate* capacity to come together, once a year, to cheer our bodies and brighten our minds in social intercourse, and especially to congratulate ourselves upon the continued and increasing prosperity of our venerable Society.

Who can estimate the blessings, both direct and indirect, which it has bestowed upon this Commonwealth! This is not the place and I am not the proper person to eulogize them. Its conservatism has perpetuated its influence. It has witnessed the origin, growth and decay of many fanciful dogmas; and, so long as its councils shall continue to be governed by the broad, general principles of testing fairly all that is new, appropriating the wheat and rejecting the chaff—in a word, so long as the vital interests of the community and the mitigation of human suffering are kept in the foreground as our professional duty, so long may we reasonably expect to outlive in the future the advent and decline of one-sided and unsound theories, and be able as now to greet each other at these annual festivals in the pleasant consciousness of that respect and confidence which those among whom our lot is cast have always so gratefully manifested towards us.

We have, it is true, upon this particular occasion, no grand and striking discovery to hold forth and say, this is the product of our last annual tillage; but every thoughtful mind must acknowledge that the past year has, at least, not been behind its predecessors, in the growth of pathological knowledge, in the more exact observation of the action of medicines, in the increased attention given to the laws of epidemics and sanitary science generally, and in the quickened interest in that most important study—the natural history of disease. These are some of the germs from which we may confidently look for fruit in its proper season. It has been well said that none of the great discoveries in science or art are ever purely accidental, for they are rendered possible only by many of these weary steps in knowledge, culminating only at rare intervals in some brilliant outgrowth. Of our fellow-workers in this anticipated harvest we have to mourn the loss of an unusually large number since we last met together; some exhausted with the burthen of more than fourscore years, and some taken at the very commencement of active professional life. Their record has already been given by your orator. May the thought of a similar record awaiting each of us excite generous and earnest impulses to do credit to our noble profession by unselfish and ceaseless devotion to those duties which it so imperatively demands of us.

He closed by proposing, as the first regular toast—

The Massachusetts Medical Society—While clinging to the memories of all that is good in the past, it greets cordially every real step in advance—

And called upon Dr. Fisk, of Northampton, who gave an eloquent response.

The Commonwealth of Massachusetts — A healthy mind in a sound body. We always look with confidence to the wisdom of her counsels for the requisite authority to enforce every sanitary measure which may be for the public good.

Replied to by his Excellency, Gov. Claflin, who thanked the profession for the cordial support they had always given to the health laws, and, especially to the establishment of the Board of Health. He spoke also of the increased facilities for hospital treatment, and, in behalf of the State, thanked the Society for its coöperation.

The Clergy and the Medical Profession—If it be true, as somewhere suggested by Archbishop Secker, that many vices are incorrigible in divinity without preliminary medical treatment, it is no less true that there are diseases incurable in physic in which the prescriptions of our clerical friends indicate the only source of permanent relief. Responded to by Rev. Phillips Brooks.

The Professor of Anatomy and Physiology—The dry-bones feel their marrow and the nerves thrill under his electric pen.

Response by Dr. Oliver Wendell Holmes, in a poem of two cantos, sparkling with wit and full of hits at the follies of the profession.

Yielding to that merry vein of humor which acts as a delightful stimulant at many an "after dinner," the Professor told the story of young Ripum Van Winkleum, M.M.S.S.,M.D., who went to sleep in the days of huge doses, to wake in the palmy age of modern practice.

The Doctors of Law and the Doctors of Medicine—We administer to them that they may live to administer upon us.

Response by Hon. Dwight Foster.

The City of Boston—We look to the well known medical experience of its executive for a quick delivery from that "locomotor ataxy" with which our pocket nerves are so seriously affected. Response by his Honor, Mayor Shurtleff.

The Army and Navy—Their deeds have already spoken for them in tones of most subduing eloquence.

Responded to by General Benham and Commodore Steadman.

Jacob Bigelow:—We all miss, to-day, the venerable presence of one, the influence of whose mature wisdom and the stimulus of whose invigorating wit has done so much to edify and animate his professional brethren. At 84 years of age he has gone by rail across the continent, in order, as he says, "to get rested." I am sure that every one will join in the hope that he will return so refreshed that we may have the pleasure of greeting him at many a future festival.

The "Great Bore"; Massachusetts's pet constellation—We always look, with pleasure, for its brilliant reflections. Responded to by Dr. Babbit, of North Adams.

The Orator of the Day; a friend in need is a friend indeed—We have listened with so much pleasure to his able discourse upon

"Our Professional Needs," that we are tempted to call upon him now to contribute something to our social needs.

Response by Dr. Wellington, of Cambridge.

Medical and Surgical Journal.

Boston: Thursday, June 2, 1870.

NOTES FROM THE UNION MEDICALE.

Spontaneous Rupture of the Unimpregnated Uterus caused by a Tumor.—In the *Union Médicale* is reported an instance of this accident. The patient went into hospital the twenty-first of February, 1866, with peritonitis, the cause of which was not discovered during life, as she would not consent to vaginal examination. At the autopsy M. Larcher ascertained by the touch that there was at the upper extremity of the vagina, a mass smooth, soft, movable, and quite prominent, which he rightly supposed to be the neck of the womb. The finger could not be passed within it. Behind the bladder was a tumor, which was globular, giving a firm resistance to the finger, and profoundly adherent to the tissue of the uterus, with which it seemed to be blended. The cavity of the cervix, enlarged to the size of a pigeon's egg, was filled by a dark-colored body of a softish feel, exhaling a fœtid odor, and resembling a decomposed mole or large sanguineous collection. The anterior quarter of the internal os was directly continuous with this growth, which arose from the point of union of the body with the neck of the uterus. Behind, the uterine neck and the rectum adhered firmly to each other, and their line of adhesion made the limits of a sort of pocket formed by the organs of the pelvis. This pocket was filled with pus, and communicated freely by its upper portion which was not closed, with the peritoneal cavity. Thus a tumor, growing in the uterine tissue at the union of the neck with the body, had advanced toward the interior of the organ, one portion developing toward the cavity of the body, the other toward that of the cervix. The dilatation of the neck resulted in thinning of some points of its surface, one of which was the seat of rupture.

M. Guyot, who presented to the *Société Médico-chirurgicale* the paper of M. Larcher, drew from this case the practical inference that the dilatation of the cervix should be attempted only with the greatest care. For, he said, the "audacious Dr. Marion Sims himself" does not undertake this measure, save with circumspection, on account of having seen metritis ensue upon the imprudent use of the sponge-tent. To all mechanical dilators, he adds, however, M. Courty justly prefers expanding bodies, and particularly prepared sponge.

M. Gallard made some comments suggested by this case. He said it afforded a very important practical hint. (As will presently appear, his inference was opposed to that of M. Guyot.) He concluded that the rupture of the uterus was attributable to gangrene, as the result of pressure exerted upon the uterine tissue of the polypus. He considered that as the external os was beginning to dilate, the finger could have been got into the cervical cavity. There was, therefore, no insurmountable obstacle to the descent of the fibrous polypus into the vagina. And yet, rupture of the uterus took place. This fatal termination should cause reflection. It indicated that in such a case as the one in question, a certain promptitude of action is called for. In the case under consideration, it was certain that if an attentive exploration could have been made—if it had not been refused by the patient—it would have been competent to have recourse to a practice brought into honorable notice of late years by Professor Simpson, and more recently described in detail in the book of Dr. J. Marion Sims—the dilatation of the uterine neck by means of prepared sponge or metallic stems. Such dilatation once made permitted the introduction of the finger into the uterine cavity, and by consequence the exploration of this cavity in all parts. This dilatation was especially of great service in the case of foreign bodies, polypi, and fibrous growths, and in the diagnosis of the cause of metrorrhagia in certain instances.

M. Gallard then related a case in his own practice. Two years previously, a young woman came under his care at the hospital with profuse metrorrhagia. On examination he found the uterus enlarged. The neck was closed, and the diagnosis being uncertain, the Doctor asked himself if the patient was not suffering from internal metritis, with hæmorrhagic tendency. But on making a vaginal examination during the menstrual epoch, it had been easy to ascertain the presence of a foreign body inside the cervix, which was then patulous. The menses having ceased, the cervix closed, and the tumor, the presence of which had been learned, was no longer accessible. He then had recourse to dilatation by means of prepared sponge, and this dilatation, easily obtained in the course of twenty-four hours, without injury to the patient, was sufficient to allow the introduction of the index-finger into the uterine cavity. He then not only convinced himself of the presence of the foreign body, but made out its form, its mode of implantation, and its precise point of origin. He satisfied himself that he had in hand a fibrous tumor of the size of a pullet's egg, growing by quite a large base from the fundus of the uterus, near the right cornu. The diagnosis having been established, M. Gallard abstained from immediate interference, hoping that the uterine contractions would eventually elongate the pedicle, and permit the tumor to emerge into the vagina, as usually happens. He kept watch of the patient for a year, but there was no descent of the tumor. Therefore, fearing that the attacks of hæmorrhage which had become incessant, would cost the patient her life—the more that the strength had for some time been failing, and that she had become very anæmic—he decided to extract this fibrous growth. He began by incising the lips of the cervix on each side, thus commanding the uterine cavity. But, he confessed to having met with great difficulty in manœuvering, on account of the enormous base of implantation of the polypus (diameter three centimetres at least), and of its high situation near the right cornu. He feared to use the scissors, because the implantation being at the very fundus of the organ, he was in dread of perforating the uterus, and decided to introduce a loop of wire mounted on an ecraseur. He succeeded, with much difficulty, in placing the loop around the pedicle, and in five or six minutes he had made section at the very level of the base of implantation. There was no hæmorrhage. At this stage of the operation there occurred a difficulty which caused some embarrassment. Section having been accomplished, and the tumor being free from attachment, the uterus contracted strongly, and if the operator had not taken the precaution to keep the cervix dilated by means of the finger held within the os, the uterine cavity would certainly have closed, and the polypus would have remained imprisoned in this cavity, as sometimes happens with the placenta in parturition. Dr. G. waited a few minutes until the contraction became less violent, and then succeeded in extracting the polypus by a sort of artificial delivery. The patient had no bad symptoms, and made a complete recovery.

Dr. Gallard claimed that this case showed that though such uterine tumors may be temporized with to a certain extent, it yet will not do to remain altogether inactive. The uterus doubtless required to be humored, but the practitioner should not be terrified beyond measure by the symptoms liable to be produced by active interference with that organ. Dr. G. was convinced that energy, audacity even, if such a term be deemed applicable, might well be allied to a certain extent with prudence; and he was ready to assert that in a case similar to the one he had reported, and which was quite analogous to that of M. Larcher, ill-timed delay was more dangerous than prompt and sure action.

M. Forget replied at some length to M. Gallard, deprecating too great readiness to operate on the womb. In the course of his remarks, he said there were some women in whom the "organ was a sort of *noli me tangere*," and that he had seen a certain number among such, while he was in charge at *La Pitié*, perish of peritonitis following slight operations.

M. Gallard rejoined that he was not the champion of the English and American practice in the treatment of uterine affections; but he adopted what there was of good in the methods of exploration or treatment recently proclaimed ; and he repeated that much advantage was to be derived from the artificial dilatation of the uterine cervix. Very often this procedure was the only means of getting at the cause of metrorrhagia. The dilatation removed all doubt by facilitating a most complete and profound exploration, and one which would be totally impossible without the procedure in question. He had on several occasions had reason to congratulate himself on having resorted to it, his patients not having experienced the slightest bad symptom. As to intra-uterine tumors of fibrous structure, he was with M. Forget so far as to acknowledge that there was danger in attempting to extract them, unless they projected into the uterine cavity so as to allow of their being encircled by a wire at the base ; but in the case he had just reported he had before the operation ascertained that such projection existed ; and had indicated in advance, with almost mathematical precision, the very seat of the implantation.

M. Forget, in his turn, declared that he repudiated all preliminary operations for purposes of diagnosis ; because it could not be known certainly what might be the result, and because an exploratory operation apparently the most harmless might be followed by grave consequences. He had not forgotten the accidents which he had witnessed at the period when scarification (*abrasion*) of the uterus was recommended by Récamier, and those accidents had made him circumspect. If M. Gallard had seen nothing similar, it was to be concluded that he had hitherto met with very accommodating wombs ; but M. F. feared that M. G. would not always be so fortunate. As to the case M. Gallard had reported, M. Forget considered it one of very interesting surgery, and which testified to the ability of his colleague.

A Case of Sudden Death from an Attempt to put in place a Fragment of the Occipital Bone is reported in another number of the same journal. A man working at the bottom of a well was struck upon the nucha by a stone weighing ten kilogrammes. He was prostrated, and carried home unconscious. M. Deroyer reached the wounded man a few hours after the accident, and found him somnolent to a degree, but in possession of sensibility, of power of movement, and of intelligence. Interrogated by the physician, the patient gave a most minute account of the circumstances of the accident and then fell back into somnolence. M. Deroyer found the scalp laid open, and also the occipital bone exposed and fractured. The lower fragment was depressed, the upper one lapping over it after the manner of the tiles of a roof. M. Deroyer, intending to attempt the replacement of the fragments, wished to ascertain their condition and the most favorable point for the introduction of an elevator. He made very slight pressure with his fingers. At that instant the patient expired. The importance of circumspection in such explorations was inferred.

DR. BUCKINGHAM *VS.* MR. DARWIN BARNARD AND OTHERS.

In a former issue we gave a notice of a published " Correspondence concerning a Fatal Case of Placenta Prævia." Since then we have received another copy of the pamphlet, " republished with an Appendix by D. Barnard " ; and have also heard read at the Obstetrical Society two reports of the case alluded to in the correspondence— one by Dr. Buckingham, the other by Dr. Swan.

The pamphlet of Mr. Barnard has been so widely circulated that we need not rehearse its additions to the previous document. Though we do not wish to forestall any rejoinder which Dr. Buckingham may choose to make, we are constrained to say a word as a supplement to our former remarks. It is remarkable that the extra-judicial affidavit of one of Mr. Barnard's witnesses should make Dr. Buckingham leave his patient and " go to the further end of a long parlor," when, as we are informed, the patient's bed stood in the middle of the third story front chamber of house No. 620 Tremont Street ; it appearing by the testimony of the same witness that Dr. B. was all the while in the room with the patient. It is also remarkable that the deponents should have at such a trying time noticed so accurately by the clock the minutes which marked the intervals between the different procedures alleged. It is proper also to note that Dr. Buckingham has, on one very suitable condition, repeatedly offered to answer interrogatories, and even suggested a legal investigation.

The contradiction between Dr. Buckingham and Dr. D. Humphreys Storer is a point which, for the present at least, we leave without comment.

THE NEW YORK MEDICAL RECORD ON THE HISTORY OF ANÆSTHESIA.—To show how history is made, the following extract is copied from the last issue of the New York *Medical Record*, May 16th, 1870, p. 144 :—

"In the year 1847, Dr. Simpson first produced insensibility during accouchement by the use of sulphuric ether. During the same month [!] this anæsthetic was applied by Dr. Morton in this country during the extraction of teeth. Dr. Simpson, after his [!] discovery, devoted much attention to the demonstration of the safety of anæsthetics as employed in obstetrics, subsequently discovering the properties of chloroform, which he regarded as more manageable," &c.

Fortunately, Sir James Y. Simpson's own letter to Dr. Jacob Bigelow, published last week in the columns of this JOURNAL, contains the following (p. 391) :—

"The first case of anæsthetic operation under sulphuric ether occurred at Boston on the 30th September, 1846. The first case of an anæsthetic operation under chloroform occurred at Edinburgh on the 15th November, 1847."

This would seem to be conclusive, but in another quarter of a century perhaps the New York *Medical Record* will be cited by some English writer as valuable American authority advocating the English origin of anæsthesia. B.

MESSRS. EDITORS,—I read with great interest Dr. Bowditch's account in the JOURNAL of the physiological laboratory at Leipsic under the care of Prof. Ludwig. Some of your readers who have been his pupils, or those who may become so hereafter, will be pleased to find in the Leipsic *Illustrite Zeitung* for March 6th, 1869, a very good portrait of Prof. Ludwig, and a picture of the laboratory constructed under his charge, which Dr. Bowditch described.

Ludwig was, from 1855 to 1865, professor of physiology at the "Josephinum" in Vienna. Besides the immense amount of regular work he conducted, he gave private courses of lectures in experimental physiology, which I was so fortunate as to attend during the winters of 1857–58 and 58–59. I am free to confess that no part of my European study gave me greater respect for the science of my profession, or inculcated better and more accurate investigation, than the long hours spent with Prof. Ludwig, following his physiological experiments. I would strongly advise those going abroad, to spend some little time at least under his tuition at the new laboratory in Leipsic. I am sure they never will regret it.

Prof. Ludwig, as author and experimental physiologist, is too well known to require comment here from me. He lectures to be understood, and is not content till all those hearing him comprehend. He is remarkably quick and successful in experiments and vivisections. I have always felt that I owed him a debt of gratitude for kindnesses which I take this liberty of mentioning. Would that Boston had such a physiological laboratory and such a teacher at its head. Respectfully,

B. JOY JEFFRIES, M.D.

15 *Chestnut Street*, *May* 19, 1870.

DOUBLE BIRTH WITH PLACENTA PRÆVIA—MOTHER AND BOTH CHILDREN SAVED. By A. F. MAGRUDER, M.D., Sharon, Miss.—Aug. 21st, 1869. Was called to Emma R., a colored woman, æt. 25 years, previously the mother of eight children, her first having been a double birth. I found her prostrate from hæmorrhage, with quick and feeble pulse, and anxious countenance. Stated that she had been in active labor about two hours.

A few minutes previous to my arrival, she had given birth to a female child, buttock presentation, as stated by her "granny." Finding respiration established, I tied and severed the cord at once, and proceeded to examine the mother. On introducing the finger, I found the placenta partially detached and occupying the os and upper portion of the vagina. The spasmodic pains had subsided, but when my fingers were passed around the placenta, I at once detected the vertex of a second fœtus presenting against and bearing it down.

My object now was to hasten the labor, if possible, and arrest the hæmorrhage. With a view to this, I kneaded the fundus of the uterus with the fingers of one hand, while with the other, introduced into the os uteri, I produced "orificial stimulation."

The effect was prompt and satisfactory. A vigorous pain occurring, I took advantage of it to relieve the remaining adhesions of the placenta, which was immediately expelled, bringing along membranes and fœtus. I hastily divided the membranes, and, taking hold of the cord, which I found pulsating, tied and severed it, and by prompt application of the cold douche resuscitated the child. The mother, by the use of proper means, in due time reacted, and I left her comfortable, in the enjoyment of her new-born daughters.

The nature of this case, I think, may be readily understood. The margin of the placenta, originally occupying the os uteri, had been detached at the first birth, allowing the fœtus, which was quite small, to occupy the os and be expelled, the fœtus at the same time acting mechanically to prevent the hæmorrhage which would necessarily have occurred. But the placenta, becoming more extensively detached after the first birth, was forced down by uterine contraction, and, occupying the os, was fully engaged by the presenting part of the second fœtus, which would most likely have resulted in fatal hæmorrhage but for timely interference.

The mother presents an interesting and remarkable case of fecundity, being in her 26th year and the mother of ten children.—*New Orleans Journal of Medicine.*

Opium-eating and Hypodermic Injection.—We find the following letter in the New York *Medical Record*:—

Sir,—In your issue of March 15th I notice, in an article by Dr. J. H. Bill, on "A New Hypodermic Syringe," with a list of formulæ that may be used in this kind of medication, the following statement, viz.: "When long-continued use of morphia is required, the danger of the habit of opium-eating will be avoided if we inject the opiate." As I believe this opinion to be entirely a mistaken one, and calculated to lead to grave errors in practice, I call attention to the two following cases, which I doubt not are a fair sample of what will occur in others under similar circumstances:—

In December, 1869, Mr. G., æt. about 60 years, in returning by steamer from Europe, was attacked, after exposure to cold, with a severe sciatica, involving the whole of the left limb. From his report, during a tempestuous and protracted voyage, his suffering was extreme. I found him, on arrival, exhausted by severe pain and loss of sleep. Fifteen drops of Magendie's solution were hypodermically administered in the evening, giving him the only refreshing sleep he had had in two or more weeks. The injection was continued in gradually reduced doses about forty times within less than two months, at nearly the same time of day. We both noticed his craving for it, and the restlessness induced by the want of it when omitted, which was only feebly allayed by any substitute. It was only by a strong and persevering effort of the will that he could discontinue the treatment, which was rapidly growing into a settled habit.

The second case (not my own) is a very melancholy one. A gentleman, aged about 40 years, some months ago, having a painful affection about the ankle joint—a combination of neuralgia and rheumatism as I understood—was hypodermically treated with morphine by his physician a few times, and was told to repeat the process for himself, as he needed it to combat his sufferings. He has so availed himself of this advice that now he is a confirmed slave to the degrading habit of opium-taking, weak in body and mind. The leg and thigh of the affected side are so thickly studded with the scars of the innumerable punctures of the syringe that scarcely any healthy appearing integument can be seen. He cannot now forego the demand (as I am credibly informed) that his system day by day makes upon this drug, and is as perfectly enthralled by it as if he had been an opium-*eater*, instead of absorbing it through the cellular tissue for all this time. "Verbum sap."

Yours, &c. J. G. Sewall, M.D.

The Action of Small Doses of Ipecacuanha.—It may save some trouble to intending correspondents if we define a little more accurately the kind of evidence on this subject which we desire to collect. With every wish to be courteous and fair, we must decline to receive statements about the action of infinitesimal doses. Life is short, and the space of our journal is limited; we really cannot, therefore, recommence a controversy which is only kept open by gentlemen who decline to be guided by the ordinary principles of evidence accepted by men of science, whether medical or any other. The question before us is a totally different one:—What is the effect of administering a quantity of ipecacuanha, not inferior, or only slightly inferior, in total amount to the doses recommended in the class-books, but divided into minute portions which are administered with great frequency? Is it or is it not the fact, that such a mode of administration, such a *gradual* impregnation of the blood with the remedy, produces simply *toning* effects upon the sympathetic and the visceral branches of the par vagum; arresting vomiting in one direction, congestion of bronchial and alimentary mucous membrane in another, and excessive secretion in a third? To any one not prejudiced by a foregone conclusion we think it will be evident that this is an entirely new question, and has no relation whatever to the old dispute between the homœopathists and the (for the most part imaginary) allopathists.—Ed. Practitioner.

On this subject Mr. R. Colquhoun writes to us as follows:—"In a note to Dr. Phillips's article this month, you call for further evidence as to the power of small doses of ipecacuanha in controlling vomiting. As a slight contribution to that evidence, perhaps you may deem the following case worthy of notice. On the 6th of November I was asked to see a Mrs. S., who was stated to have been suffering from severe and uncontrollable vomiting for some months past. Patient is thirty-five years of age—bilious temperament—three months advanced in pregnancy—is much emaciated—tongue very foul, and mouth filled with thick, viscid mucus, which she constantly keeps spitting. States that she has been suffering from vomiting for over two months—is daily getting worse—vomits every half-hour, and can retain nothing on her stomach. Has had three children, and suffered for several months in a like manner during each of her previous pregnancies, but has never been so bad as she is on this occasion—could never get anything to do her good. 'Effervescing draughts—two tablespoonfuls every three hours,' &c., &c.—she had taken *ad nauseam*. Ordered minim and half doses of vin. ipec. in water, to be taken frequently. Nov. 8th—Find patient much improved—tongue cleaning—sickness not so troublesome. Nov. 15th—Vomiting has entirely ceased—tongue clean—appetite good—was out of doors yesterday."—*Practitioner.*

Malignancy and Cancer.—At the Pathological Society on Tuesday evening, the remarks made by Dr. Crisp and Mr. Arnott touched upon one of those inaccuracies of expression which tend to confuse men's minds. Two terms are not infrequently employed as synonymous which are not really so; these are *malignant disease* and *cancer*. Now cancer, as well defined by Mr. Arnott, is a definite morbid growth possessed of certain qualities, among which rapid growth, tendency to invade surrounding textures, to recur on removal, and to attack distant organs, as well as lethal effects, are the most notable. But these qualities are not confined to cancer either hard or soft; they are common to it with other morbid growths, and constitute *malignancy*. Cancer, then, is a distinct pathological lesion—the most malignant of all, no doubt, and, to a certain extent, the type of malignant disease; but malignancy is a *quality* characteristic of cancer, epithelioma, and other morbid growths, not an entity.—*London Medical Times and Gazette.*

Dr. Druitt.—The professional and other friends of Dr. Druitt will be glad to hear that he is now fast recovering from an attack of fever which he unfortunately contracted in the south of Europe, whither he had gone for a few weeks' change of air. Absence for some little time longer from London and professional life, however, will probably be necessary to perfect his recovery.—*Ibid.*

The question of the origin of the white corpuscles of the blood is one to which it is by no means easy to give a satisfactory reply. A communication, however, has lately been made by Dr. Klein to Virchow's *Archiv*, which goes far to show that they result from the fission of pre-existing corpuscles.—*London Lancet.*

A physician recently advertised for a partner who could "stand a confinement." He received an answer from six widows with sixteen children each.

DEATHS FROM CHLOROFORM.

We regret to announce another death from chloroform at University College Hospital on the 3d inst. The morbid appearances found after death are insufficient to explain the fatal result. Chloroform, as it happened, was administered in a more diluted form than usual, proportion of the anæsthetic to air being thirty instead of thirty-five minims to each thousand cubic inches of air, as hitherto employed by Mr. Clover, the inventor of the instrument used on the occasion. The verdict given at the inquest, which was merely of a formal character, was "Death by misadventure."—*British Medical Journal,* May 14, 1870.

Medical Miscellany.

Dr. Wm. B. Atkinson, of Philadelphia, Secretary of the American Medical Association, says:

"I propose to publish, in *pamphlet form*, an *official* copy of the minutes of our late session. Price 25 cents per copy. Of course it depends upon a sufficiency of subscribers, as it will be at my own expense."

We recommend those desirous of seeing a more complete account of this remarkable gathering than was given by this Journal, to send their subscriptions to Dr. Atkinson.

The Governor of the State of California has organized a Board of Health and Vital Statistics, of which Dr. Henry Gibbons, of San Francisco, is President, and Dr. T. M. Logan, of Sacramento, Secretary. The remaining members of the Board are Drs. J. F. Montgomery of Sacramento, L. C. Lane of San Francisco, F. Walton Todd of Stockton, C. E. Stone of Marysville, and Luke Robinson of Santa Clara.

At a late meeting of the Société Imperiale de Chirurgie, M. Liégeois expressed his belief in several species of diabetes, and among others of one which he termed the *physiological*, usually found in large, well-filled-out, fat people of any age. "It is in society and not in the hospitals that we find this class of diabetics, great lovers of starchy food, of pastry and other substances, the ingestion of which decidedly increases the proportion of sugar contained in the blood in a given time. We often observe in these individuals abscesses and boils, which get well the same as in non-diabetic individuals, and surgical accidents which may happen to them are not specially subject to serious complications."—*L'Union Médicale.*

Glycerate of Tar.—The *American Journal of Pharmacy* gives a formula and mode for the extraction of the medicinal virtues of tar, previously triturated with magnesium carbonate by a menstruum of two parts glycerine, one part alcohol and five parts water. This glycerate possesses all the virtues and properties of tar, of which 30 grains are represented in each ounce.

Treatment of Croup by the Local Application of Lactic Acid.—A. Weber, of Vienna, has drawn attention to the use of lactic acid in the treatment of croup, as it has the power of dissolving fibrinous exudations. He recommends the direct application of the acid after the performance of tracheotomy, partially with a view to keeping the canula clear and partially of reaching the bronchial membrane, but by the use of this remedy he has not lost a single case of croup. Even in cases where the difficulty of respiration was intense, where both inspiration and expiration were difficult, the signs were relieved in six or seven hours after the application of this remedy. A solution of 20 drops to the drachm of water is used as an inhalation every two or three hours; under its influence the cough softens and the symptoms yield. He suggests the use of a direct application of a solution through the perforation in the trachea.—*Dublin Medical Press and Circular.*

The Annual Meeting of the Maine Medical Association will be held at the Court House, Bangor, on Tuesday, June 28th, 1870, at 10 o'clock, A.M. The session will continue three days.

Sir Thomas Watson.—We are glad to hear that Sir Thomas Watson continues to make satisfactory progress towards recovery.—*Lond. Med, Times and Gazette.*

Mrs. Marsh, of Baltimore, recently cut the throats of her four children and seriously wounded her mother, who attempted to escape with one of them. Her subsequent conduct clearly establishes that she was insane at the time the fearful deed was done.

Erratum.—Page 400, 2d column, at end of 18th and beginning of 17th line from bottom, for "attempt" read *action.*

Pamphlets Received.—Notes on the Physiology and Pathology of the Nervous System, with reference to Clinical Medicine. By Meredith Clymer, M.D., Univ. Penn. New York: D. Appleton & Co. Pp. 53.—The Remedies we Use. An impartial View of the present State of the Materia Medica, with Suggestions for its Improvement. Nashville, Tenn.: Gamble & Co. Pp. 20.—Annual Report by the City Registrar of the Births, Marriages and Deaths in the City of Boston, for the Year 1869. Pp. 46.

Died,—At Saxonville, 27th ult., Dexter Baldwin M.D., 72, formerly of Maine.

Deaths in fifteen Cities and Towns of Massachusetts for the week ending May 28, 1870.

Cities and towns.	Number of deaths in each place.	PREVALENT DISEASES. Consumption.	PREVALENT DISEASES. Pneumonia.
Boston	88	19	6
Charlestown	10	1	2
Worcester	17	2	2
Lowell	11	1	1
Milford	7	1	0
Chelsea	3	1	0
Cambridge	10	3	2
Salem	8	5	0
Lawrence	6	2	0
Springfield	3	1	0
Lynn	12	4	1
Fitchburg	5	1	1
Somerville	3	2	0
Fall River	11	1	1
Haverhill	3	2	0
	197	46	16

Boston and Worcester each report one death from smallpox. From all the above-named places there are reported seven deaths from scarlet fever, two from typhoid fever, and two from croup.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending May 28th, 88. Males 52—Females 36.—Accident, 6—apoplexy, 1—disease of the bowels, 1—congestion of the brain, 2—disease of the brain, 5—inflammation of the brain, 4—bronchitis, 3—burns, 1—cancer, 3—cerebro-spinal meningitis, 1—cholera infantum, 1—consumption, 19—convulsions, 1—croup, 1—diarrhœa, 4—dropsy of the brain, 2—drowned, 1—scarlet fever, 3—gastritis, 2—disease of the heart, 2—infantile disease, 1—disease of the kidneys, 4—congestion of the lungs, 1—inflammation of the lungs, 5—measles, 1—old age, 2—paralysis, 1—peritonitis, 1—premature birth, 2—smallpox, 1—teething, 1—tonsillitis, 1—unknown, 4.

Under 5 years of age, 32—between 5 and 20 years, 10—between 20 and 40 years, 19—between 40 and 60 years, 20—above 60 years, 7. Born in the United States, 59—Ireland, 20—other places, 9.

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THE LAW OF MALPRACTICE.

By ALEXANDER YOUNG, of the Suffolk Bar.

PART I.—MALPRACTICE IN CIVIL CASES.

IN a previous article[*] we considered the rules and principles of Medical Evidence and their application by the courts. The grave defects which we then pointed out in the system of practice, which, by intrusting the selection of skilled witnesses to the parties in a suit, too often perverts truth and justice to secure a partizan triumph, are sometimes strikingly apparent in the verdicts of juries in cases of alleged malpractice.[†] If the results of these cases, however unfortunate they may be for the defendants, and incidentally injurious to the medical profession by impairing public confidence in the skill and integrity of its members, shall be the means of effecting a reform in the system, the experience will be cheaply purchased. For, as we shall have occasion to show, the injustice which is sometimes done in this way is not owing to mistakes in the law as laid down by the courts, but to misapprehension of the facts by juries. One evidence of this is found in the small number of cases of malpractice which are carried to the tribunals of last resort on points of law. In the ninety-nine volumes of Massachusetts reports there are not half a dozen cases of this kind, and the reports of sister States and of England show a similar paucity. The first American editor of Taylor's Medical Jurisprudence, himself a prominent physician, while admitting that most of our judges have done their best to secure just verdicts in actions for alleged malpractice, complains that juries are notoriously stupid and unjust.[‡] Since this sweeping charge was made, however, there has been a marked improvement in this respect, and the change is creditable to the increased intelligence of the people of whom jurors are in general no unworthy representatives.

The foundation of the liability of the medical man for malpractice rests on well-settled principles of the law of contracts, which are of salutary influence and extensive application. By undertaking the practice of his profession he enters into an implied agreement with his patients that he has ordinary skill in the treatment of disease, and that he will apply that skill with ordinary and reasonable diligence and care. In requiring from him the possession and exercise of these qualifications, the law exacts no more rigid obligation than it imposes on any persons who offer their services to the public for a compensation, in any trade or profession requiring preparation and skill. The same rule is enforced upon the artisan as well as upon the physician or the lawyer. In its application, however, there is a special reference to the nature of the employment and the character of the service. Thus the degree of care and skill usually exercised by the blacksmith will naturally be less than that which is shown by the watch-maker, yet both are defined by the term ordinary. Moreover, the different operations performed by the same workman will demand a different measure of these qualifications, which, however, come under the same general rule. The degree of care and skill, therefore, which is required by the law, is proportioned to the delicacy and difficulty of the service, and is usually less in the case of the artisan who deals only with insensate matter than in that of the physician or surgeon who operates upon the complex, sensitive and delicate machinery of human life and health. The reason why extraordinary skill is not required from the medical man in consequence of the grave responsibilities which rest upon him is, that if the standard of qualification were placed so high, few practitioners would be able to attain to it. The result would be that while the rich would be able to procure the best medical assistance, the mass of the people would suffer from the want of competent attendants, and thus become the easy victims of quacks and pretenders, so that disease and death would reap a more abundant harvest. In adopting a criterion of skill which is adjusted to the average proficiency of medical men, the law helps to protect the public from imposition and quackery, and obliges the physician to keep up with the improvements in his art or science, and thus tends to elevate the character of the profession. It chooses that middle course, which experience has shown to be requisite to hold men to the responsibilities of their position without imposing on them unreasonable and excessive burdens.

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[*] See No. 26, vol. iii., July 29, 1869.

[†] Taylor's Medical Jurisprudence, 6th Amer. ed., pp. 274, 304. An extraordinary case of incompatible and conflicting opinions of medical experts upon identical facts is reported in this Journal, vol. 72, pp. 250–252. "Who will credit medical testimony," says the writer, "if on a question of science it is so utterly irreconcilable?"

[‡] 6th Amer. ed., p. 304.

The liabilities which the law enforces on the medical practitioner are, as we have seen, the result of his publicly assuming a professional character. By availing himself of the advantages which such a character confers, he incurs also its corresponding responsibilities. But a different rule is applied to an unprofessional man who is called upon to render professional services. The physician or surgeon is liable for injuries resulting from his want of ordinary care or skill, because his position implies the possession and exercise of these qualifications, and this is the case even where the services are rendered gratuitously. But if a patient applies to a person who is not a medical man for his gratuitous assistance, who, either does not exert all his skill, or administers improper remedies to the best of his ability, such person is not liable.[*] The physician or surgeon is not, however, like the common carrier or the inn-keeper, bound to attend every one who solicits his service. He is entitled to perfect freedom in the selection of his patients among those who seek his advice and assistance. But while he is not liable for *nonfeasance*, that is, for not rendering professional services unless he has promised to perform them, he becomes liable for *misfeasance* or malpractice, if after entering upon his undertaking, his patient suffers injury in consequence of his unskilfulness or negligence. It makes no difference in this latter case whether he was to receive compensation for his services or not. If he merely promised to render these services *gratuitously*, the promisee could neither compel him to execute the promise nor recover damages for its non-fulfilment, for the promise, being without consideration, has no binding force in law.[*] But the acceptance of the trust, by commencing the discharge of its obligations, is a consideration which is sufficient to sustain an implied promise to execute it faithfully. The medical man, therefore, who neglects to perform the duties which are imposed on him by his professional position, is liable for any injury which may ensue to the patient by reason of his misconduct.[†] Although the physician may refuse to take charge of a case, yet if he once accepts it he cannot withdraw from it until recovery, unless dismissed by the party employing him or the patient without giving reasonable notice of such intention, so that another medical attendant may be secured. The implied promise of the patient to pay is a good consideration for the physician's promise to attend him, and having once undertaken to treat the case, the physician who should abandon it without due notice to the other party would be guilty of negligence which would render him responsible in damages for malpractice to the patient who was injured by such misconduct. The patient may, however, dismiss the physician at any stage of the treatment without any previous notice, or assigning any reasons therefor; because the contract on his part being for no stipulated time, he is at liberty to rescind it whenever he may judge proper.[‡] But the physician, even after dismissal, is liable for any injuries which are traceable to his misconduct, although another medical attendant may have assumed charge of the case.

The doctrine that the confidence reposed in a medical man by the patient whom he has undertaken to treat, imposes upon him an obligation to exercise ordinary care and skill, has been applied in cases where no privity of contract subsisted between the parties, and it has been held that where a surgeon is employed at public charge to attend a dispensary or hospital, or renders services at such places gratuitously, he is liable to a patient just as if the latter had specially retained him. The reasons for this rule were forcibly expressed by Baron Garrow, in the case of Pippin *v.* Sheppard.[§] "In the practice of surgery particularly," said the learned judge, "the public are exposed to great risks from the number of ignorant persons professing a knowledge of the art without the least pretensions to the necessary qualifications, and they often inflict very serious injury on those who are so unfortunate as to fall into their hands. In cases of the most brutal inattention and neglect, patients would be precluded frequently from seeking damages by course of law, if it were necessary, to enable them to recover, that there should have been a previous retainer on their part of the person professing to be able to cure them. In all cases of surgeons retained by any of the public establishments, it would happen that the patient would be without redress, for it could hardly be expected that the governors of an infirmary should bring an action against the surgeons employed by them to attend the child of poor parents, who may have suffered from his neglect and inattention; and are they to be without remedy because they cannot get the names of the five hundred persons by whom the surgeon was employed, to insert in their declaration?" In cases of this kind the medical man has a two-fold liability—first, to the parties employing him for a breach of his contract with them; and secondly, to the patient for injury inflicted upon him. This is in conformity to the well-settled principle of law, that an individual may be liable to one person upon contract and to another for tort in reference to the same transaction. Upon this ground if an apothecary administer improper medicine; or a surgeon unskilfully treat his patient, the law holds them liable, though their contract was with a third person.[*]

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[*] Per Heath, J. in Shiels *v.* Blackburn, 1 Henry Blackstone, 158.

[*] Thorne *v.* Deas, 4 Johnson, 84.

[†] Shiels *v.* Blackburn, 1 Henry Blackstone, 159.

[‡] Ordronaux, Jurisprudence of Medicine, p. 98. But where an express contract is made with a physician to render professional service during a stated period, and for a fixed salary, he cannot be legally dismissed before the expiration of the term, and can recover the amount of his salary if he is prevented by the other party from fulfilling his engagement. McDaniel *v.* Yuba Co., 14 California, 444.

[§] 11 Price, 400.

The medical man is, as we have seen, subject to the general law of contracts. He is also sometimes held to special responsibilities in consequence of the nature of his employment. In the view of the law his agreement is not limited to attendance from day to day, but has reference to the conduct of the case as a whole, whenever a course of treatment becomes necessary. It comes therefore within the purview of the principles applicable to *entire* contracts. The law in regard to such contracts, so far as it relates to compensation for service or labor, has been thus expressed by Chancellor Kent. "The refusal or omission to perform the entire labor or service without any act or consent of the other party, will not entitle the party who has performed in part to recover any compensation for the service which has been performed. The entire performance is a condition precedent to the payment of the price, and the courts cannot absolve men from their legal engagements, or make contracts for them."[*] It follows from the principles just referred to governing entire contracts, that if a physician or surgeon is employed to treat a broken limb or any disease requiring definite attendance, and he is guilty of malpractice in any part of the treatment, he cannot recover compensation for the rest.[†] For where a party undertakes a work of skill and labor, and fails in the object, so that his employer derives no benefit from the work, the plaintiff is not entitled to recover anything.[‡] But when such unskilfulness or negligence is set up in defence to a suit for fees, the burden is on the defendant to establish it.[§] The legal presumption being against malpractice, it must be fully proved.[‖]

Although the medical man may undertake to perform a cure absolutely, yet unless he makes an express promise to that effect, he is only bound to exercise ordinary and reasonable professional care, diligence, and skill. If he chooses to guarantee a successful result, he becomes so far liable for the consequences, that he cannot recover compensation for his services should the case terminate unfavorably. His liability in this respect is no more rigid than that of any person who agrees to insure a favorable issue for the service or labor. Although it is often said that no person is responsible for not performing an impossibility, yet this doctrine is limited to acts whose performance is absolutely impossible. But if a party engages to do a thing which is accidentally impossible, the contract is binding, though he is unable to perform it. It is his own fault if, instead of providing against those contingencies which he knew might possibly occur, he undertakes something beyond his ability.[¶] The physician or surgeon, therefore, who makes an express promise to cure, whether in consideration of a specific sum, or otherwise, cannot recover compensation for his services should he fail to fulfil his engagement.[**]

The medical man is bound, as has been said, to possess and exercise that degree of skill which is necessary for the ordinary and reasonable discharge of his professional duties. The standard will naturally vary in different countries and at different periods in the same country, and the evidence which must be produced to satisfy the court and jury that this requirement has been complied with in a particular case will be that of medical experts. As the degree of skill demanded will depend upon the nature of the disease and the state of the patient, it may be said in general to rise in proportion to the delicacy and difficulty of the service. A mistaken opinion regarding the nature of the disease or the proper mode of treatment is not conclusive evidence of the want of due skill; it must be shown that such error resulted from the absence of that average proficiency to which we have adverted. The law recognizes the great diversity of talent and acquirement which exists among medical practitioners, and the impossibility of levelling the distinctions which nature and education have made. It does not, therefore, pronounce a physician or surgeon incompetent because he exhibited less skill than some of his more gifted brethren might have displayed, but it requires the possession and exercise of such knowledge and skill as will enable him to treat the cases that he undertakes with reasonable success. He must possess those qualifications which are adequate to the performance of the duties which, by the fact of his assuming a professional character, he declares himself able to perform, and without which no man has a right to imperil the health and lives of human beings by pretending to exercise the healing art.* These requirements are certainly not too rigid. They recognize the fact that the high standard of competency which is attainable by members of the profession in a great city, with access to medical libraries, dispensaries, and hospitals, does not exist among practitioners in small towns and villages. The highest talent naturally seeks the widest and most lucrative field for its employment, so that the standard of skill reaches its greatest elevation where the opportunities for its exercise and the rate of its remuneration are most favorable. It is true that in this progressive age, when the last results of European science are speedily transmitted to the most remote localities, a country practitioner may often be well informed in the literature of his profession, and attain a complete mastery of its accepted theories; but he cannot ordinarily have that high degree of skill and practical knowledge which is possessed by his favored brethren whose facilities for observing the various manifestations of disease and witnessing and performing important operations are far superior to his own. These considerations are of manifest significance in relation to the treatment of those diseases that have become specialties, which can only be successfully cultivated in a populous community. To determine what degree of weight should be attached to circumstances like these, is sometimes no easy matter, and Lord Ellenborough remarked in a leading English case* that he was at a loss to tell the jury what degree of skill ought to be required of a village surgeon. Necessity requires the treatment of disease under all circumstances and conditions, and if the standard of proficiency of the great city were enforced in the obscure village, people would suffer and die from the want of proper medical attendance, and become victims of the ignorance or temerity of the sciolist or the charlatan. As the law must be uniform in its application to these widely different conditions, to avoid the introduction of needless complications in the determination of cases of this kind, it is settled that the degree of skill required is that which usually characterizes the profession in the country and at the time when the services were rendered.† A lower standard than this would tend to degrade the character of the profession and jeopardize the safety of the public.

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[*] Hilliard on Torts, 2d ed., vol. i. p. 252.

[*] Kent's Commentaries, vol. ii. § 509.

[†] Bellinger *v.* Craigue, 31 Barbour, 534.

[‡] Hupe *v.* Phelps, 2 Starkie, 480.

[§] McClallen *v.* Adams, 19 Pickering, 333.

[‖] Duncan *v.* Blundell, 3 Starkie, 6.

[¶] Story on Bailments, § 217.

[**] Mock *v.* Kelly, 3 Alabama, 387.

The duty of medical men in this respect has always been recognized and enforced by the courts, that impose similar obligation on every person who publicly exercises an art or profession which implies on the part of its practitioner special knowledge and acquirements. The doctrine was long ago expressed by Chief Justice Tindal, in the case of Lanphier *v.* Phipos.‡ "Every person who enters into a learned profession undertakes to bring to the exercise of it a fair, reasonable and competent degree of care and skill." The degree of skill required in any particular case will be proportioned to the importance and delicacy of the service, and the physician is liable for injuries resulting from his want of skill as well as for those which arise from his neglect in its application.§ The want of the proper qualifications, however, is not to be inferred, it must be proved.‖ Dentists are also required to use a reasonable degree of care and skill in the manufacture and fitting of artificial teeth. But the exercise of the highest perfection of the art is not implied in their professional contract.[*] The possession of a medical degree, which has been properly obtained from an institution having authority to confer it, is *prima facie* evidence of ordinary skill on the part of its possessor.[†] But a parchment purporting to be a diploma to practise medicine, is not evidence of itself, that the college issuing it is a regularly constituted medical institution. That fact, as well as the genuineness of the diploma, must be established before the degree can be received in evidence.[‡] To prove the validity of a diploma given to a physician by a medical college of another State, it must be shown that the college existed at the date of the diploma, that it was authorized by law to confer degrees, and that the diploma was duly executed by the proper officers.[§] We may remark here that it is not the province of the courts to discriminate between rival schools of medicine, or to pronounce upon the relative value of their diplomas as certificates of ordinary skill in their possessors. To do this would not only be an assumption of critical knowledge, unwarranted by the nature of their studies and inconsistent with the object of their creation, but it would be a usurpation of the powers of legislative bodies. The latter alone have the right to grant franchises to medical institutions, and to determine what class or classes of practitioners, if any, shall be permitted to exercise peculiar privileges. But the power given by statute to medical societies, to make by-laws and regulations relative to the admission and expulsion of members, although conferred in general terms, is not an arbitrary, unlimited power. The by-laws, rules and regulations must not contravene or be inconsistent either with statutory enactments or with well-settled principles of the common law. Nor can they prejudice the rights of individuals by a retroactive operation. Thus a licensed physician, having the prescribed qualifications, cannot be excluded from the franchise on the ground that he did not conform to the conventional rules of the society at a period antecedent to his application, for the code of medical ethics, adopted by the by-laws of a county society, is obligatory on members alone, and its non-observance previous to membership furnishes no legal ground either for exclusion or expulsion. This doctrine was enforced by the New York Court of Appeals in a very recent case (1865),[*] in which the relator, a licensed physician practising in Buffalo, and a graduate of the New York Medical College, applied for a mandamus to compel the Medical Society of the County of Erie to admit him as a member. No question was made as to his possessing the usual qualifications for membership; but it was claimed that he had forfeited his right to admission by unprofessional conduct in advertising, through the public prints, his claims to peculiar skill in the treatment of asthma, consumption, and bronchitis, by the new mode of medicated inhalation in aid of the known and usual remedial agents. It was claimed by the majority of the Society that such advertisements were condemned as acts of empiricism by the code of medical ethics adopted in the by-laws and regulations of the Society,[†] and that though the objectionable practice had been discontinued by the relator, it was cause for the disfranchisement of a member, and therefore ground for the exclusion of an applicant. But the court decided otherwise in conformity with the doctrine just stated, and Mr. Justice Porter, in delivering the opinion, drew a clear distinction between the two cases. "The regulations embodied in the so-called code," said the learned judge, "are admirably framed, and commend themselves to every reader, as tending to raise to a still higher elevation the character of the learned and honorable profession to which they were submitted for approval and adoption. They are not limited in their scope to the range of moral obligations, but embrace express rules of conduct, in personal, professional and public relations. They are regulations in the various departments of morals and manners, of courtesy and etiquette, of delicacy and honor. They bind those who pledge themselves to their observance, but cannot be recognized in law as conditions precedent to the exercise of an honorable profession, by learned, able, and upright men, who have not agreed to abide by them. The non-observance of such regulations *may be made* cause for exclusion or disfranchisement, but it must be either by the agreement of parties or by the exercise of the law-making power."

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* Leighton *v.* Sargent, 7 Foster, 460. Patten *v.* Wiggin, 51 Maine, 594. McCandless *v.* McWha, 22 Pennsylvania State R., 268.

* Seare *v.* Prentice, 8 East, 347.

† Moran *v.* Burnham, per Mr. Justice Ames, Boston Med. and Surg. Journ., Feb. 3, 1870.

‡ 8 Carrington & Payne, 478.

§ Long *v.* Morrison, 14 Indiana, 596.

‖ Hancke *v.* Hooper, 7 Carrington & Payne, 81.

The right of medical societies duly authorized by statute, to try, and expel members for immorality, or gross ignorance or misconduct in their profession, is unquestioned, and the fact that a society has once before refused to prefer charges against a physician does not preclude them from again preferring the same charges, for in such proceedings they are but accusers, like a grand jury, and may receive additional testimony, or reconsider the case, and change their determination upon the original evidence. And the trial and acquittal of a physician in a court of criminal jurisdiction upon the same charges brought against him by a medical society, are no bar to an inquiry under the statute for the purpose of depriving him of his right to practise medicine and surgery, for these are entirely distinct and independent proceedings, having different objects in view: the one having regard to the general welfare and criminal justice of the State; the other simply and exclusively to the respectability and character of the medical profession, and the consequences connected with or necessarily flowing from it.[*] But no by-law or regulation can be upheld, which is unreasonable and contrary to the policy of the law. Thus a medical society has no right to expel a member for violating a regulation of the society which established a tariff of fees for medical services to be performed by its members, and fixed a minimum salary to be received by any members who should be appointed to any public office in a professional capacity, although the society adopted a resolution declaring it dishonorable for any of its members to accept any appointment or perform any services mentioned in such tariff of prices at a less sum than was therein specified, and subsequently passed a by-law authorizing the expulsion of members who should violate this regulation.[†] Such a regulation, like a condition in a contract by which a business or professional man agrees not to pursue his vocation without limitation as to locality and time, is void because against public policy. The law encourages competition, and discourages restrictions on the rights of individuals to exercise callings which are beneficial to the community, deeming the interests of the people paramount to any private agreements.

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[*] Simonds v. Henry, 39 Maine, 155.

[†] Leighton v. Sargent, 7 Foster, 470. People v. Medical Society, 32 N. Y., 191, per Porter, J

[‡] Hill v. Brodie, 2 Stewart & Porter, 56.

[§] Hunter v. Blount, 27 Georgia, 76.

[*] Bartlett v. Med. Society, 32 New York, 187.

[†] The regulation in question was taken from the Code of Ethics of the American Medical Association, of which the relator was not a member.

This doctrine is especially applicable to medical practitioners, whose services are so indispensable to the welfare of society that all attempts to restrain their legitimate exercise are discountenanced by the law. No man or set of men has a right to make it a condition of a contract with a physician or surgeon, the breach of which, if held valid, would deprive him of his professional privileges, and thus impair his usefulness as a public servant, that he should be bound in his general practice by any fixed charge, for such a principle besides its other evil influences would encourage extortion and monopoly. The Supreme Court of New York, in the case above mentioned, declared the regulation void, and the expulsion of the member unauthorized and illegal, and that a mandamus would lie directing that he be restored or recognized as a member of the medical society.

In the view of the law the diplomas of different incorporated schools duly authorized to confer medical degrees are entitled to equal consideration. By the common law, any individual has the right to exercise any profession or business for which he is competent, and is only liable for injuries inflicted upon others. The application of this broad doctrine, which was mainly derived from the Roman law,[*] has been more or less restricted in practice by statutory enactments. In England these limitations are more rigorous than in this country, where there is a disposition to relax the salutary restraints which are of so much benefit in maintaining a high standard of medical proficiency. The abandonment of the license system, which was a guarantee that the practitioner had some qualifications for his position, has occasioned evils which can hardly be exaggerated, but the spirit of our legislators is sometimes so warm in favor of an unwise freedom for ignorance, quackery, and fraud, and of foolish prohibition for honest industry, that we can hardly hope for a change in this respect. This State has, like so many others, repealed the statutes which required as a condition to the right of recovery for medical services that the practitioner should have been licensed by certain medical societies, or obtained his degree from an authorized professional school.

As in the absence of legislative enactments the courts cannot exclusively recognize any particular system of medicine or class of medical practitioners, any person who makes the treatment of the sick his vocation is, in contemplation of law, a physician, and this is the legal significance of the word when used in a contract. Thus, where an agreement of employment between an opera director and a vocalist provided for a forfeiture of a month's salary in case the latter should fail to attend at any stated performance, except in the event of sickness certified to by a doctor, to be appointed by the director, it was held that the provision was binding upon the artist, although the director appointed a person in the practice of what is known as the homœopathic system of medicine.* But although any person who is engaged in the public exercise of the healing art is, in the absence of statutory restrictions, entitled to all the legal rights of a physician, yet he is bound to practise according to his professed and avowed system.† For by holding himself out as a member of a particular school, the law presumes that the patient employed him in the belief that his practice would conform to his profession. It has accordingly been held that if the settled law and practice of the profession allows of but one course of treatment in a case, then any departure from such course might properly be regarded as the result of want of knowledge, skill, experience, or attention. If there are different schools of practice, all that any physician or surgeon assumes is, that he will faithfully treat the case according to the received law and practice of his particular school. These rules which have been laid down in a recent case‡ in Maine will illustrate the dangers which beset the medical man who departs in practice from the system which he publicly professes, rendering him liable to damages for malpractice in case of injury resulting to his patient, and preventing him from recovering compensation for his services, should no benefit be derived from his treatment.

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[*] In the matter of Smith, 10 Wendell, 449.

[†] People *ex rel.* Gray *v.* Erie Co. Med. Soc., 24 Barbour, 570.

[*] The philosophic Montesquieu, in showing how the character of laws depends upon the peculiar circumstances in which they are made, finds in the freedom with which the Romans permitted any one to practise medicine, a reason for the severe punishments that the civil law inflicted on the unskilful or negligent physician, which he contrasts with the qualifications required from medical practitioners in France, which obviated the necessity for such rigorous penalties.—*Esprit des Lois*, Livre 29, chap. 14.

In determining whether a physician or surgeon has exercised ordinary skill in the treatment of a patient, regard must be had to the advanced state of the profession at the time. A medical man is bound to keep up with the important inventions and discoveries in the healing art, so far as they have become the common property of the profession, and cannot shelter himself behind the usages and methods which later improvements have rendered valueless and obsolete. The progress of medicine and surgery has been so marked, in recent years, and the facilities afforded for the diffusion of the latest results of scientific investigation have been so great, that no medical practitioner can safely rely on these exploded theories, antiquated instruments or cast-off practices. Equally futile would it be for the unskilful operator to justify himself by the authority of some great name in medical science, whose modes of procedure, however valuable in his own time, have been superseded by others still more valuable and important. So marked has been the advance and diffusion of professional knowledge, that the tyro in surgery could teach Dupuytren and Hunter many lessons in their science; while many a medical student is familiar with truths of pathology, which would have astonished Bichat and Cullen. The achievements of the great men of the past should never be forgotten in the triumphs of a more advanced civilization, for the crucial test of greatness in practical affairs is the accomplishment of important undertakings with means seemingly inadequate to their fulfilment,* the unfolding of the germ, which only the favoring influences of a later day may develop into the mature and ripened fruit; but it is a matter of just reproach to their successors, if instead of promoting the interests of science and humanity, they seek to cover their own imperfections and deficiencies with the mantle of departed excellence. It was a subject of proud felicitation to Macaulay, in comparing the state of England in his own time with its condition in 1685, that every bricklayer falling from a scaffold, every crossing-sweeper run over by a carriage, could have his wounds dressed and his limbs set with a skill, such as all the wealth of Ormond or of Clayton could not have purchased.† All these improvements raise the standard of proficiency among medical men, and devolve upon them responsibilities commensurate with their increased knowledge and opportunities for usefulness. The old reports are full of medical dogmas, which modern science has exploded, and which would not now receive the sanction of the accredited authorities in either profession. The evidence which, at the present time, would alone have any weight with a jury in questions of malpractice as determining the standard of ordinary skill, would be that of the recognized authorities in medical science at the time when the services were performed, as attested by their adoption in ordinary practice by competent members of that particular school. The doctrine has been well expressed by Mr. Justice Woodward, in a leading case in Pennsylvania.* "The law," said the learned judge, "has no allowance for quackery. It demands *qualification* in the profession practised—not extraordinary skill, such as belongs only to a few men of rare genius and endowments, but that degree which ordinarily characterizes the profession. And in judging of this degree of skill, in a given case, regard is to be had to the advanced state of the profession at the time. The patient is entitled to the benefit of these increased lights. The physician or surgeon who assumes to exercise the healing art, is bound to be up to the improvements of the day. The standard of ordinary skill is on the advance, and he who would not be found wanting, must apply himself with all diligence to the most accredited sources of knowledge."

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* Corsi v. Maretzek, 4 E. D. Smith, 1.

We are aware that some of the foregoing cases do not come under the head of malpractice. But as this article is intended for medical readers, we have taken the liberty of introducing some matters of interest to them which are not strictly within the limits of the subject under consideration.

† Bowman v. Woods, 1 Iowa, 441.

‡ Patten v. Wiggin, 51 Maine, 594.

* A distinguished contemporary surgeon said of Sir Astley Cooper, "All instruments are alike to him, and I verily believe he could operate as easily with an oyster-knife, as with the best bit of cutlery in Laundy's shop." Memoir of Cooper in Pettigrew's Medical Portrait Gallery, Vol. I.

† History of England, Vol. I., p. 325, Philadelphia, 1856.—A distinguished English surgeon, in referring to the advance made in curative surgery in recent times, observes, "The most experienced are but students. As years roll on, cases of improvement occur in our history, which teach us that the advanced knowledge of this year would have rendered unnecessary the operation of the last. Within my own recollection, the operating theatre of St. Bartholomew's Hospital was the scene of weekly mutilations of the frame by the knife, while, at the present day, a little more than a quarter of a century, such operations are reduced to less than half of their former number." See Elwell on Malpractice and Medical Evidence, pp. 57–58.

The medical man cannot rely upon his acknowledged reputation with the profession or the public to protect him from the consequences of rashly and unskilfully experimenting upon his patient. This was the principle laid down in a case† tried in England in 1767, and frequently referred to in later decisions, in which Mr. Baker, a medical man of great eminence, who for twenty years had been first surgeon at St. Bartholomew's Hospital, and was a prominent lecturer on surgery and anatomy, and noted for his humanity as well as distinguished for his professional attainments, was mulcted in damages for £500, for unskilfully disuniting the callus formed on a fractured leg after it was set. It appeared from the evidence that the plaintiff's leg was first set by another surgeon, who a month after the operation found the leg was "healing and in a good way;" the callus was formed; there was a little protuberance, but it was thought not more than usual. It was also proved that at the end of nine weeks from the commencement of the treatment, the plaintiff was well enough to go home, and that when the defendant Baker and the apothecary who was sued with him first saw the patient they said he had fallen into good hands. On their second visit they expressed the same opinion, but on coming a third time some alteration was suggested, and the patient got into a passion, and was unwilling the defendants should do anything to his leg. He told them he was afraid they would disunite the callus, and, as his leg was straight, it was not necessary. Baker and the apothecary, Stapleton, then took up the leg without informing the plaintiff of what they were going to do. As one of the witnesses testified, "Baker took up the plaintiff's foot in both his hands and nodded to Stapleton; and then Stapleton took the plaintiff's leg upon his knee, and the leg gave a crack, when the plaintiff cried out to them and said, 'You have broke what nature had formed.' Baker then said to the plaintiff, 'You must go through the operation of extension.' A heavy instrument of steel, 'that had teeth,' was put upon the leg to produce the extension." Four months after the operation the patient was "still very ill, and bad of it." The surgeons who testified in the case said that compression and not extension was the proper mode of procedure, and that the instrument described as having been used by Baker was improper, one of them remarking that he had not the least idea of it. They bore witness, however, to Baker's high reputation for surgical skill and benevolence. In pronouncing judgment, Lord Chief Justice Wilmot said, "It is objected that this is not the proper action, and that it ought to have been trespass *vi et armis;* in answer to this it appears from the evidence of the surgeons that it was improper to disunite the callus without consent; this is the usage and law of surgeons; then it was ignorance and unskilfulness in that very particular, to do contrary to the rule of the profession, what no surgeon ought to have done; and indeed it is reasonable that a patient should be told what is about to be done to him, that he may take courage, and put himself in such a situation as to enable him to undergo the operation. That the plaintiff ought to receive a satisfaction for the injury, seems to be admitted, but then it is said the defendants ought to have been charged as trespassers *vi et armis.* The Court will not look with eagle eyes to see whether the evidence applies exactly or not to the case; when they can see the plaintiff has obtained a verdict for such damages as he deserves, they will establish such verdict if possible. For anything that appears to the court, this was the first experiment made with this new instrument, and if it was, it was a rash action, and he who acts rashly, acts ignorantly; and although the defendants in general may be as skilful in their respective professions as any two gentlemen in England, yet the court cannot help saying that in this particular case they have ignorantly and unskilfully acted, contrary to the known rule and usage of surgeons." Elwell, in commenting upon this case, remarks that strictly speaking, Baker was not chargeable with unskilfulness in trying this experiment, but that he was guilty of a rashness and recklessness that indicated a criminal intent or reckless disregard of life and limb, and was all the more blamable on account of his superior skill and knowledge.[*] But whatever may have been the technical offence, the evidence clearly establishes the culpability of Baker, and it seems to us that there was a conspiracy between him and the apothecary, of which the plaintiff was the unfortunate victim. This seems to have been the opinion of the Chief Justice, who said that the apothecary's advising Baker not to take the guineas offered him by the plaintiff, and his prompt action when Baker nodded to him, were evidence for the jury of his complicity. What, in the meantime, had become of Baker's "benevolence," is a question which we leave to the moral philosopher.

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* Mc.Candless v. Mc.Wha, 22 Pennsylvania State R. 261.

† Slater v. Baker, 2 Wilson, 359.

Where by improper treatment of an injury by a surgeon, the patient must inevitably have a defective limb, the surgeon is liable to an action, even though the mismanagement or negligence of those having the care of the patient, may have aggravated the case, and rendered the ultimate condition of the arm worse than it otherwise would have been.[†] This doctrine is of familiar application in the law, and regards the primary author of a wrongful act, which must be certainly followed by evil consequences, as fully responsible, although the ill effects of his action have been increased by the misconduct of others. The difficulty of apportioning the blame will not relieve the original wrong doer from liability. A more difficult question arises when the habits of the patient are alleged to have contributed to the injury. Where such habits are set up by the medical man in defence to an action for malpractice, he must show that there was such a connection in time between them and the injury that the relation of cause and effect could be reasonably presumed. Thus where it had been shown by the evidence of scientific men that a fractured limb of an intemperate man was more difficult to cure than that of a temperate man, but where no such evidence was offered of the degree of intemperance then existing, or how long it lasted, to show the difficulty of such cure; it was proper for the court below to refuse to allow the patient's habits and character, in this respect, to be put in issue for an indefinite period backward. It was enough to lay it open for seven years previous to the injury, if not too much.[*] On the familiar principles of law governing the relations of principal and agent, which make the former responsible for the acts of the latter within the scope of his employment, it is held that a surgeon is liable for an injury done to a patient through the want of proper skill in his apprentice; but in an action against him the plaintiff must show that the injury was produced by such want of skill, and it is not to be inferred. In this case, which was tried in England many years ago, it was decided that if a person goes into a surgeon's shop and asks to be bled, saying he has found relief from it before, and does not consult the person there as to the propriety of performing the operation, if there are no external indications of its being improper, such person is justified in performing it, and the surgeon will not be answerable for its not producing a beneficial result.[†] Though the principle embodied in this decision is a sound one, and is susceptible of an extensive application, it could not be extended to justify the reckless or indiscriminate administration of remedies of a notoriously dangerous character, for the medical man might thus be led to further the whims of ignorance or mania, and perhaps abet the scheme of the suicide. In ordinary cases, where a physician prescribes these remedies, it is obviously incumbent upon him to obtain from the patient or other sources such information in regard to his constitution and habits as would alone justify him in this treatment, and also to give such directions for their use as would be necessary to ensure their beneficial influence, or to avoid dangerous consequences. If from a neglect of these precautions by his medical attendant the patient should suffer injury, he would undoubtedly be liable for malpractice. "In cases," for example, says Ordronaux, "where such drugs are prescribed as Battley's solution, preparations of opium, of morphia, hyoscyamus, conium, stramonium, aconite, belladonna, ether, chloroform, hydrocyanic acid, Indian hemp, strychnia, digitalis, &c., an omission to give directions for their cautious use with due warning of their dangerous powers, would justify a presumption of gross negligence."*

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[*] Malpractice and Medical Evidence, p. 114.

[†] Wilmot v. Howard, 39 Vermont, 447.

[*] McCandless v. McWha, 22 Pennsylvania State R. 268.

[†] Hancke v. Hooper, 7 Carrington & Payne, 81.

The doctrine laid down by the English courts that a surgeon is responsible for the want of proper skill in his apprentice would, on analogous principles of the law of agency, make the medical man who intrusts his students with the care of patients liable for injuries resulting from their unskilfulness or negligence. The student is under such circumstances the agent of the physician, who, by thus impliedly vouching for his competency, becomes responsible for his misconduct. Hence, if he vaccinate with unsound matter, or leech, or cup, or bleed, in such an improper manner as to cause injury, the medical man whose agent he is, becomes liable to the injured party.† It should be remembered that the treatment of a patient by a physician is a personal trust which has been reposed in him from confidence in his skill and judgment. It is a well settled principle of law that the execution of a trust of this kind cannot be transferred to another without the permission of the beneficiary. Such a transfer of authority, when made to another physician with the consent of the patient, would undoubtedly relieve the first practitioner from liability for the acts of his substitute. But the case of a student is different. In contemplation of law he is only the agent of the medical man who impliedly adopts and ratifies his acts done within the scope of his authority. Though the patient acquiesce in the management of the case by the student, his treatment is still that of the physician who for his own convenience uses him as a substitute. The liability of the physician or surgeon in such a case comes within the purview of the principle embodied in the familiar legal maxim, *Qui facit per alium facit per se.*‡ A principal, however, is not responsible for the criminal acts of his agent, and if, for example, poison should be wilfully administered by a student to the patient, the physician could not be held accountable, unless it were shown that he was in fact accessory to the crime, or believed or had reason to believe that the student was likely to commit it. But the line between criminal and civil responsibility is sometimes faint and shadowy. There can be no doubt that for acts of gross unskilfulness or negligence on the part of the student, indicating inexcusable ignorance of the art which he presumed to exercise, the physician who, by permitting him to treat his patients, impliedly guaranteed his possession and exercise of the necessary qualifications, would be liable in damages to the patient who had been injured by such misconduct.

Besides being legally bound to possess ordinary skill, the medical man is bound to carefully exercise it in the management of a case. The absence of ordinary care constitutes negligence which, when producing an injury to the patient, will make his medical attendant liable for malpractice. It is obvious that these requirements are mutually indispensable to the safety of society. As the possession of skill affords no absolute security that it will be diligently and faithfully applied, it is necessary to enforce upon the eminent practitioner the exercise in a reasonable degree of that assiduity which contributed to form his proficiency and establish his reputation, as well as to require it from the humblest of his professional brethren.* As we have previously shown, the gratuitous character of the service does not exempt him from responsibility. The law is no respecter of persons, and the poorest charity patient has the same right to faithful and considerate attention from his medical attendant as the millionaire. Gratuitous services are only honorable when they are conceived and executed in the spirit of a comprehensive benevolence, which regards the health and happiness of the patient as of far more importance than any pecuniary recompense, and the moral law is therefore fitly supplemented by the common law. The medical man, however, as we have seen, is not legally bound to undertake such services. They are imperfect obligations, which are voluntary in their inception, and it is only when he has actually entered upon their execution that they acquire a binding force in law. Ordinary care is required from every person who undertakes for a compensation to perform a service for another requiring preparation and skill. But although the same rule is applied to the artisan as to the medical man, it does not follow, as has sometimes been supposed, that human life and health are regarded by the law as of no more consequence than insensate matter. Ordinary care, as defined by the courts, means the care which is usually exercised under similar circumstances by those who are engaged in the same employment. "Different things," says Story, "may require very different care. The care required in building a common doorway is quite different from that required in raising a marble pillar, but both come under the description of ordinary care." "It undoubtedly requires," says Elwell, "a higher degree of skill and care for the successful and safe treatment of *iritis* than that required in rheumatism, because, in the former case, the most important and delicate structure of the system is involved, the parts of which, when affected with an inflammation, may be soon destroyed, so rapid and dangerous is the disease; and unless treated intelligently, and with great promptness, blindness quickly supervenes; while, in rheumatism, but little, perhaps nothing, can be done hastily, it being a disease of the joints and muscular system, usually requiring a long course of treatment, giving to the attending physician full time to study his case, and apply his means of cure."* It is obvious, moreover, not only that different diseases will require different care, according to their distinctive peculiarities and the nature of the parts affected, but that the same malady or a similar wound or fracture, will exhibit such varied manifestations in persons of different sexes, ages, constitutions, and habits of life, and will be so modified by climatic and other influences, whose importance can only be appreciated by the experienced observer, that what would be ordinary care in one case would be gross negligence in another. It is for the jury, aided by the evidence of the medical experts, to determine whether or not the physician or surgeon has exercised that degree of diligence and attention which satisfies the requirements of the law. It is not surprising, perhaps, that misled by the cross-lights thrown upon the subject by conflicting scientific witnesses, who too often "lead to bewilder and dazzle to blind," they should sometimes wrongfully attribute to the carelessness or unskilfulness of the medical practitioner what is the result of the imperfect reparation of nature, to causes difficult of detection because they lie hidden in the recesses of individual organization, or are the product of external influences which elude the penetration of science. The law, however, is clear that the medical man in the performance of his professional duties is liable only for the want of ordinary diligence, care and skill, and the Courts have power, which has often been beneficially exercised, to set aside verdicts which are manifestly against the weight of evidence, and inflict excessive damages on the defendant.

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* Jurisprudence of Medicine, p. 68, note 1.

† Landon v. Humphrey, 9 Connecticut, 209.

‡ Ordronaux, Jurisprudence of Medicine, p. 103; Chitty on Contracts, 10 Amer. ed. pp. 226-7.

* "I make no distinction," said Baron Garrow in a famous criminal trial, "between the case of a person who consults the most eminent physician, and the case of those whose necessities or folly may carry them into any other quarter. It matters not whether the individual consulted be the President of the College of Physicians, the President of the College of Surgeons, or the humblest bone-setter of the village; but be it one or the other, he ought to bring into the case ordinary and reasonable care, skill, diligence and caution." Rex *v.* St. John Long, 6 Bingham, 140.

What constitutes ordinary care depends, as we have seen, on the condition of the patient. No degrees are recognized in negligence, and the old rule that the physician or surgeon is only liable for gross carelessness is no longer in force. But medical men are not responsible for want of success, unless they have expressly guaranteed a cure, nor for mere mistakes in matters of reasonable doubt and uncertainty; but their undertaking is that they will use their best judgment in cases of doubt as to the best course of treatment.* The doctrine has been thus expressed in a recent English case. "To render a medical man liable, even civilly, for negligence or want of due care or skill, it is not enough that there has been a less degree of skill than some other medical man might have shown, or a less degree of care than even he himself might have bestowed; nor is it enough that he himself acknowledges some degree of want of care; there must have been a want of competent and ordinary care and skill, and to such a degree as to have led to a bad result."† It is a familiar principle of law that a person is not liable for injury to another whose own misconduct has contributed to it, because no man can be permitted to take advantage of his own wrong. This rule which recognizes and enforces the equitable doctrine that right and obligation are reciprocal, is of manifest application to the relation of physician and patient. It is the duty of the patient to cooperate with his professional adviser, and to conform to the necessary prescriptions, but if he will not, or under the pressure of pain cannot, he has no right to hold the medical man responsible for his own neglect‡. And though a defendant has been guilty of culpable fault or negligence, producing an injury, yet if his act was not wanton and intentional, and the plaintiff by his own misconduct, or want of ordinary care, essentially contributed to produce the result, he cannot recover.* But the doctrine that a party cannot recover, where his own negligence concurred in producing the injury for which he seeks redress, does not bind him to the utmost possible caution, but to ordinary care and prudence only.† It has been held that an action for damages will be in favor of the husband against a surgeon for unskilfully operating upon his wife, notwithstanding she dies of the operation, and this principle applies to any case in which death results from improper treatment.‡ In cases where a young child has received injury from a physician's misconduct, the negligence of a parent, or other person to whose care the child is intrusted, has the same effect in preventing the maintenance of an action for such injury that his own want of due care would have if the patient were an adult. This is only the application of a doctrine to the case of physician and patient which has been enforced in other relations by courts of high authority, and which though questioned in some quarters, is the law in this Commonwealth and in New York.§

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* Malpractice and Medical Evidence, pp. 28, 29.

* Chitty on Contracts, 10th Amer. ed., 601, and cases cited.

† Rich v. Pierpoint, 3 Foster & Finlason, 35.

‡ McCandless v. McWha, 22 Penn. State R. 268.

We have seen that a medical man is liable for injuries occasioned by his unskilfulness or negligence although the patient did not contract with him, as in the case of a hospital surgeon whose services were gratuitous. On the same principle it was held, in Kentucky, that a physician who administered medicine to a slave without the consent of his owner, was responsible for all the evil consequences which resulted from his act.‖ This doctrine was applied in a leading case in New York, in an action against a manufacturing pharmaceutist, in which it was held that a dealer in drugs and medicines who carelessly labels a deadly poison as a harmless medicine, and sends it so labelled into market, is liable to all persons who without fault on their part are injured by using it as such medicine in consequence of the false label. The liability of the dealer in such cases arises not out of any contract, or direct privity between him and the person injured, but out of the duty which the law imposes upon him to avoid acts in their nature dangerous to the lives of others. He is liable, therefore, though the poisonous drug with such label may have passed through many intermediate sales before it reaches the hands of the person injured. Where such negligent act is done by an agent, the principal is liable for the injury caused thereby.* In this case a jar of the extract of belladonna was prepared and labelled by the defendant's agent as extract of dandelion, and as this false label was a continuous misdirection by the defendant, inevitably tending to mislead and injure others, he was justly held liable for the natural and probable consequences of his wrongful act. The liability of druggists for malpractice rests on the same ground with that of physicians, and Blackstone in his definition of *mala praxis* enumerates among the injuries thereby occasioned to a man's health those caused by the neglect or unskilful management of his physician, surgeon, or apothecary.† The doctrine, indeed, was expounded long before Blackstone's day, and may be traced back to the Roman Jurisprudence, which established a high standard of honor among medical men and stigmatized their unskilfulness or negligence as criminal.‡ The principle was recognized in an early English decision. In Tessymond's case, a chemist's apprentice delivered by mistake a phial of laudanum instead of one of paregoric, thereby causing the death of an infant. It appeared that the bottle of laudanum and the bottle of paregoric stood side by side, and the apprentice, who filled the phial, mistook one label for another. His unskilfulness or ignorance in a matter which he was bound to be conversant with, was held to be negligence, which made him guilty of manslaughter.§ In cases of this kind where the position of the defendant implies skill and knowledge, the malicious intent which is necessary to sustain an indictment is presumed from the absence of these essential qualifications.

This doctrine is of obvious application in the case of the dispensing pharmaceutist. He is held to more rigid liabilities than the dealer in ordinary articles of merchandise, because the substances which he compounds are, when misapplied, dangerous to human life and health. The general merchant or tradesman, in the absence of an express warranty, is not responsible for the quality of his wares, but the vendor of provisions for domestic use, by the fact of offering them for sale, undertakes and insures that they are sound and wholesome. Public policy, which dictates this requirement in the case of the provision dealer, makes the rule still more imperative in that of the dispensing pharmaceutist, who deals in substances more pernicious when abused, than those employed in almost any other vocation, and a familiarity with which is a matter of special knowledge not possessed by the public. The retail druggist or apothecary, therefore, impliedly warrants the nature and good quality of the medicines he dispenses. As the degree of care required is particularly high in matters affecting life and health, his responsibility is very great. He is not only bound to be able to compound and dispense the prescriptions of medical men, but he is also bound to have knowledge and care enough to detect manifest errors in such papers. He cannot shelter himself behind the mistakes of the medical man, for it has been held in this State that the physician who prescribes and the apothecary who compounds a noxious medicine are both liable for malpractice.[*] If, therefore, a prescription is presented to him, no matter by whom it may be signed, which on its face shows its dangerous tendencies, as if for example it calls for a preparation which is evidently designed for internal administration in poisonous doses, reasonable care would require him to refrain from furnishing it to a customer without satisfactory investigation. A neglect of these precautions would undoubtedly render him liable to a suit for damages or an indictment for manslaughter, according to the nature and result of the injury. To tamper with the dangerous and deadly drugs of pharmacy is to turn a beneficial agency into a hurtful channel, and such action by an apothecary, whose situation implies the exercise of a high degree of care and skill, is peculiarly culpable. Should death ensue from his gross unskilfulness or negligence, the excuse of good intentions will be unavailing, for under such circumstances malice is presumed from misconduct. And although the druggist is not accountable criminally for the acts of an agent, yet he is responsible in damages for injuries occasioned by the want of ordinary care or skill in his clerks and assistants. By the very fact of employing them he guarantees their proficiency, and if with or without his knowledge, in his presence or in his absence, the fancy goods clerk, shop boy, or other incompetent attendant, should imperil the health or lives of his customers by mistake in compounding a prescription, both principal and agent would be liable for the consequences. These principles were applied in a recent case in Philadelphia, where a druggist's clerk was tried and convicted of manslaughter for gross negligence in furnishing *atropia* on a prescription which called for *assafœtida*, three grains being given in four pills, thereby causing the death of an adult patient.[*] It appeared in evidence that the prescription had been already compounded five or six times by the defendant and his father. It was proved that the defendant had devoted many years to the study of his profession, and that he enjoyed an excellent reputation for skill as a druggist and for peace as a citizen. There was some dispute between opposing counsel as to whether the word assafœtida was plainly and legibly written, or whether it might not have been mistaken for atropia. The court in charging the jury observed that the question for their consideration was, "Did the defendant employ reasonable care in the preparation of this medicine? This involves two points: First, his reading of the word referred to; secondly, his knowledge of the deadly character of the drug he used. *For though he innocently mistook the language of the prescription, yet if the exercise of reasonable care would have warned him that he was preparing something which would inevitably kill, it would be criminal in him to go on.* The inquiry, then, is not whether he put in the proper drugs, or made a mistake, for his default herein would not necessarily be crime. But the higher and truer test is the exercise of reasonable care. If you find an absence of this reasonable care, you must convict the defendant. If you conclude that he was reasonably careful, or have a fair doubt of his guilt, you should acquit him."

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* Birge v. Gardner, 19 Connecticut, 507.

† Ordronaux on Med. Jur., p. 81, and cases cited.

‡ Cross v. Guthery, 2 Root, 90.

§ Wright v. Malden & Melrose R. R. Co., 4 Allen, 283; Callahan v. Bean, 9 Allen, 401. A contrary doctrine is maintained in the American Law Review, April, 1870.

‖ Hord v. Grimes, 13 B. Munroe, 188.

* Thomas v. Winchester, 2 Selden, 397.

† Commentaries, Book iii. c. 122.

‡ Institutes, Liber iv., tit. iii. § 6-7.

§ 1 Lewin's Crown Cases, 169.

The phrase ordinary and reasonable care is not here employed in its loose popular sense, but is measured by the dangers and responsibilities of the work done and the instrumentalities used, and pharmacy certainly requires a very high degree of attention and fidelity. In fact, under some circumstances, an act of omission is tantamount to the most wilful misconduct. This doctrine was applied in the case of Hollenbeck *v.* Fleet & Semple,[†] in which the defendants, a firm of druggists, were held liable for their negligence, and that of their clerk, who, in compounding a physician's prescription for snake-root and Peruvian bark, pulverized these substances in a mill in which cantharides had been previously ground, without subsequent cleansing. The suffering and injury caused to the patient by this noxious mixture occasioned a verdict in his favor for damages to the amount of $1,141.75, which the court refused to set aside as excessive. "If mistake or accident," said the court, "could excuse the sending of a medicine different from that applied for, which we do not admit, and cannot readily conceive, there could have been neither mistake nor accident in this case, because the fact of the previous use of the mill was known to the vendors, and they are absolutely responsible for a consequence which that knowledge enabled them, and made it their duty to avoid. Even accidents or mistakes should not occur in a business of this nature, and they cannot ordinarily occur, without there has been such a degree of culpable, if not wanton and criminal carelessness and neglect, as must devolve upon the party unavoidable and commensurate responsibility." After observing that the vendor of drugs should, like the vendor of provisions, be held as an insurer of the wholesomeness of the articles he dispenses, the Court say, "Sound public policy in relation to the preservation of the health and even of the lives of the people, would seem to require that this rule should have a rigid and inflexible application to cases similar to the one under consideration; as the responsibility of the defendants in this case does not depend upon the degree of care, or diligence, or negligence used by them, but upon the naked fact, that when requested to compound a medicine for plaintiff to be composed *alone* of snake-root and Peruvian bark, the preparation sent to plaintiff contained also the poisonous drug cantharides, which had been recently ground in the same mill, the taking of which caused him great pain, suffering and sickness, if it has not permanently injured his health."

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[*] Hilliard on Torts, 2d ed., vol. 2, p. 315, note a.

[*] Commonwealth *v.* Joseph H. Bower—Ordronaux's Jurisprudence of Medicine, p. 280.

[†] 13 B. Munroe, 229.

Liability for malpractice, as has been shown in the case of physicians and apothecaries, does not depend upon the existence of any direct contract between the parties, but is based upon the obligation which the law imposes on any person who undertakes the performance of an act which directly affects the health or lives of others, so to execute it that no injury shall result from his agency. The principle was applied in the case of Gladwell *v.* Steggall, in which the declaration stated that the plaintiff, an infant, employed the defendant, a surgeon, to cure her, and then claimed damages for a misfeasance. The defendant alleged that he was not employed by the plaintiff. It appeared in evidence that the defendant had previously attended other members of the family, and his bill in this instance was made out to the plaintiff's father. The defendant was sent for by the mother of the child, and the child allowed him to operate. Chief Justice Tindal remarked that this was evidence that she employed him and that he accepted the employment. It was accordingly held that it was immaterial by whom defendant was employed, or, if material, plaintiff's submitting to defendant's treatment was sufficient proof of the allegation of employment by her.* The medical man who is intrusted with the care of a patient is thereby empowered to adopt such treatment as is adapted to the varying necessities of the case, and is only liable for the abuse of his authority. Where a party to a suit alleges that the physician or surgeon has exceeded his reasonable discretionary powers, the burden is upon him to establish that fact. Thus, where the wife of the defendant, being afflicted with a dangerous disease, was carried by him to a distance from his residence, and left under the care of the plaintiff as a surgeon; and after the lapse of some weeks the plaintiff performed an operation on her for the cure of the disease, soon after which she died; the Supreme Court of Massachusetts decided, in an action by the plaintiff against the defendant to recover compensation for his services, that the performance of the operation was within the scope of the plaintiff's authority, if in his judgment it was necessary or expedient, and that it was not incumbent upon him to prove that it was necessary or proper under the circumstances; or that before he performed it he gave notice to the defendant; or that it would have been dangerous to the wife to wait until notice could be given to the defendant.* The plaintiff in this case, which was tried in 1837, lived sixty miles from the defendant's place of residence, where he himself had once lived, and was a surgeon of good repute. The disease with which the defendant's wife had been afflicted was a scrofulous affection which was not a cancer or cancerous when she was placed under the plaintiff's care. Ten weeks afterwards he amputated her breast, and she died about a week after the operation. The defendant had no communication from the plaintiff nor from his own wife from the time that he carried her to the plaintiff, until a day or two before her death, when he went to the plaintiff's house. Chief Justice Shaw, who delivered the opinion of the court, observed that although it might have been prudent for the surgeon to have communicated with the husband under these circumstances, yet he could safely trust to the judgment of the wife, and that her assent was to be presumed; that if the defendant intended to show that the operation was unnecessary or improper, under the circumstances, or that it was unskilfully or carelessly performed, the burthen of proof was on him. In another Massachusetts case,† where an action for malpractice was brought by husband and wife against a physician for unskilful treatment of a cut upon the wife's thumb, several physicians testified that the disease of the thumb was a felon, which often resulted from a punctured wound. There was evidence tending to show that the defendant did not communicate to the plaintiff the nature of the disease, but that he opened her thumb, giving as a reason that there was a nerve partly cut off, and it would be better to cut it entirely off. It was held that in such action it is competent for the defendant to prove that physicians in addressing their patients often call the tendon of the thumb a nerve; and that it is good medical treatment in some cases for physicians to withhold from patients the extent of their disease and their actual condition; and that the treatment of the disease, as detailed by the principal witness for the plaintiff, was proper in the opinion of medical men.

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* 5 Bingham's New Cases, 733.

* McClallen *v.* Adams, 19 Pickering, 333.

† Twombley *v.* Leach, 11 Cushing, 397.

Although a medical man may err in his diagnosis, this alone will not render him liable for an injury, for a physician or surgeon is not chargeable for ignorance of a case if he prescribes for it rightly.* Where, however, the defendant showed a want of ordinary skill in not detecting the kind of injury for fifteen days and the patient suffered pain and increased expense in consequence thereof, even though he afterwards refused to submit to a proper remedy, it was held that he could recover damages for his special injury. In this case the court observed that it was proper to allow the plaintiff to exhibit the injured limb to the jury.† It is obvious that in diseases of a contagious or infectious nature, a degree of care is required from the medical attendant commensurate with the dangers which would result from their extension. It is the duty of physicians who are attending patients afflicted with such disease, when called to attend other patients not so infected, to take all such precautionary measures as experience has proved necessary to prevent its communication to them. And the fact that a physician who was called in was warned that if he attended any patients affected with the smallpox, his services would be dispensed with, and another employed, failed to deny that he was attending such patients, and promised not to do so, but continued to attend, and did communicate smallpox to the patient, was proper evidence to go to the jury, on a suit to recover the charge for attention to reduce the damages.‡ It was held in the same case that a physician who communicates to his patient an infectious disease is responsible in damages for the suffering, loss of time and danger to which the patient may be subjected. And the defendant, in an action by a physician to recover for his services, may reduce the recovery by pleading and proving that the physician communicated an infectious disease to his family, and that from this cause his attendance was protracted and his bill increased. It is observed by Ordronaux that what is said of smallpox in the above case will apply with equal force to *puerperal* fever, so that physicians attending upon patients affected with this latter disorder should avoid visiting parturient women, or they may be made responsible in damages for the consequences of communicating it to them. "Nor," he continues, "is the responsibility less in cases of *vaccination*, where the physician, while he does not guarantee the *specific* value of the vaccine virus, yet guarantees its freshness, so that if he inoculate a patient with virus in an altered stage, constituting, as it then would, mere putrid animal matter, and erysipelas, or any injury to a limb arises, requiring its amputation, he will undoubtedly be held responsible for the suffering, loss of time, and permanent injury to the patient."§

The measure of damages in suits for malpractice will depend upon the peculiarities of each case, and regard is generally had to the circumstances of the parties themselves.‖ No absolute rule can be laid down on this subject, which is largely in the discretion of the jury, and it is only in cases when their verdict is clearly against the weight of evidence and there is reason to believe that they were actuated by passion or by some undue influence perverting their judgment, that the court will disturb their finding. In Howard *v.* Grover,* the court observed that the practice of surgery is indispensable to the community, and while damages should be paid for negligence and carelessness, surgeons should not be deterred from the pursuit of their profession by intemperate and extravagant verdicts. Reference is made to the small sums paid to country practitioners for professional services as compared with their city brethren. In an interesting case in Ohio of alleged malpractice in ophthalmic medicine and surgery, in which depositions of prominent New York and Boston oculists were read, the court observed in charging the jury, "Should you find that the plaintiff is entitled to damages at all, you are to limit them strictly to the effect of the malpractice. It would be outrageous to charge the loss of time, the suffering, the loss of eye-sight to the defendants, if it was the natural result of disease, even if they were guilty of some little delinquency, not in itself producing the sad effect. Nothing must be charged to them but what is to be traced directly to their want of ordinary care and skill, and dependent upon it."† In cases, however, of manifest disregard by the medical man of his professional obligations, exhibiting gross negligence by which the patient suffers injury, the plaintiff may recover vindictive as well as actual damages.‡ This is in accordance with the well settled principle of law which allows a jury in actions of trespass or tort, to have in view the enormity of the defendant's conduct rather than compensation to the plaintiff.§ In such cases of malpractice, the object is not so much indemnity to the patient as punishment of the physician.

It is a common complaint among medical men that surgeons are more liable to suits for malpractice than physicians, and that while the former are held responsible for the imperfect reparation of nature, the latter may often violate with impunity the plainest obligations of professional duty. There is a good deal of truth in this charge, and it is not difficult to understand the reasons for the invidious distinction. The processes of surgical art are more palpable than the operations of the physician, and the results of treatment are more obvious in the former case than in the latter. Every surgeon knows that even a simple fracture when oblique, or when the joint is involved, or the osseous system diseased, sometimes presents difficulties which no care and skill can overcome, and that in compound fractures the obstacles are often still more formidable. Yet these are the cases most prolific of verdicts against medical men. The surgeon is too often regarded as only a skilful mechanic who can repair a fracture as easily as his brother workman can mend a chair. The law of compensation works here to his disadvantage.

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* Fowler *v.* Sergeant, 1 Grant, 355. † Ibid.

‡ Piper *v.* Menifee, 12 B. Munroe, 466.

§ Ordronaux, Jurisprudence of Medicine, p. 93. Landon *v.* Humphrey, 9 Connecticut, 209.

‖ Fowler *v.* Sergeant, 1 Grant, 355.

* 28 Maine, 97.

† McMillen *v.* Hewitt, Sprague & Rodman in Elwell on Malpractice and Med. Ev., pp. 146-162.

‡ Cochran *v.* Miller, 13 Iowa, 128.

§ Per Grier, J., in Stimpson *v.* The Railroads, 2 Wallace, 164. Sedgwick on The Measure of Damages, 4th ed., pp. 522-539.

The praise which follows a brilliant operation is balanced by the blame that attends a failure. Few unprofessional observers, who admire the manual dexterity shown by a skilful operator, are aware that this executive skill is not the most important qualification of the great surgeon. They do not know that behind and above it are qualities more solid though less showy, which constitute his best claim to distinction. They are ignorant that the intuitive perception of the exigencies of a case, in which the scalpel moves with the quickness and precision of the mind that directs its course, is the last result of learning and experience which are fashioned into faculty and wielded as a weapon. As they do not understand that the scientific knowledge which determines the necessity of an operation is a more valuable attainment in the surgeon than the mechanical knowledge which qualifies him to perform it, it can hardly be expected that they should appreciate the importance of those truths of pathology, anatomy, and physiology, which must be grasped by the surgeon who would guide the knife to a successful issue, or attain that higher and profounder knowledge, that mastery of all the resources of his art, which, in a critical emergency, enables him not to cut, but to cure. The masses see only results, and charge the surgeon with the unfortunate consequences due to adverse influences that would baffle the most consummate ability and the most conscientious care. The physician, on the other hand, is judged more leniently. The air of mystery which envelops his operations, and the impossibility of tracking the course of his remedies, has an impressive influence on the popular mind, which is always prone to see wisdom in obscurity and to regard the unintelligible with veneration and awe. His diagnoses are beyond the reach of unprofessional criticism, and even the formulas of his prescriptions and the nature of his remedial agents, are "caviare to the general." Nor when the tell-tale tombstone reveals the fate of his patients is it possible for untrained or remote observers to determine whether they passed away in nature's appointed time, or whether their demise was hastened by his incapacity or misconduct. It is from these causes that medicine has become the chosen field of operations for cheats and tricksters, who, using the admitted uncertainties of medical science as a shield which, unfortunately, has proved alarmingly effective to protect them from the clutch of the criminal law, boldly traffic in the weakness and credulity of men. They thus convert an agency which, in the hands of conscientious and competent practitioners, is fruitful in benefits to suffering humanity, into a device for pandering to the frailties and vices of their fellows in order to gratify their morbid desire for notoriety, their prurient passions, or their sordid greed. There is no more melancholy chapter in human history than that which recounts the success of these pretenders, and as people seldom profit by the experience of others or their own, the record repeats itself. The warnings conveyed by the public press and the sacrifice of valuable lives by the most unmitigated quackery, could not keep the London populace in comparatively recent days, from crowding the rooms of St. John Long, where noble lords and marchionesses jostled common clay in their eager striving for the coveted treatment of that pretended consumption curer, whose polished manners and artful assurance obtained for him the patronage of the fashionable world, and whose flagrant malpractice finally brought him to the criminal bar, from which he emerged, acquitted in one case and sentenced to pay an inadequate fine in another, to be more courted and patronized than ever before.* Thus it is that, as the difficulty of proving malicious intention has protected the criminal malfeasant, so the difficulty of tracing the connection between his treatment and the results of it protects the incompetent physician from a civil action for malpractice, while the surgeon is deemed responsible for the results of natural causes, which he is unable to modify or control, or for the misconduct of others. In these cases it is clear that he is not *legally* liable.

We may remark here that the law holds the consulting physician or surgeon responsible for the possession and exercise of the same qualifications which are required in the general practitioner. Negligence or want of ordinary skill on his part, whenever contributing to the injury of a patient, makes him equally liable with the attending medical man.† But he is not responsible for the acts of his professional associate after he has been discharged by the patient. No arrangement, however, can be made between the consulting and attending surgeon without the consent of the patient, which will preclude him from holding both of them responsible for acts of unskilfulness or negligence. Such acts, when committed by either of them and not disavowed by the other, are presumed to be done with his sanction and approval. If it could be shown that by an agreement between the parties one medical man acted solely as adviser, while the other attended exclusively to the practical management of the case, neither of them could be held liable for the other's default. But ordinarily, where a physician or surgeon is called in for consultation, and one is subordinated to the other in the control and direction, so that the relation of principal and agent might be said to subsist between them, the former would of course be responsible for the latter's misfeasance, while the agent would still be liable for injuries resulting from his own misconduct, because he has no right to undertake an office implying the exercise of ordinary care and skill in the treatment of disease without possessing and applying the requisite qualifications.‡ As in all cases of this kind the determination of the facts is for the jury, it would ordinarily require very cogent evidence to satisfy them that such a relation of principal and agent, or any other than a joint responsibility, subsisted between the different medical men having the charge of the case, as to exonerate any of them from liability, although if the fact of agency were clearly proved, the principal could not be held liable for the criminal acts of his agent who, in such a case could be held to answer to a suit for damages or to an indictment, according to the nature and extent of the injury. The principal in such a case may recover in an action of tort against the agent for all the damages caused by the latter's want of reasonable care or skill.*

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* Rex *v.* St. John Long, 6 Bingham, 440, and 6 Carrington and Payne, 423.

† Moran *v.* Burnham, Boston Med. and Surg. Journal, N. S., Vol. V., No. 5.

‡ Hilliard on Torts, 2d ed., vol. ii. p. 466. Parsons on Contracts, 4th ed., vol. i. p. 47.

In view of the risks to which the surgeon is exposed in the ordinary practice of his profession, it has been suggested that in all cases where injuries to the joints or bones are suspected, if the parties applying for treatment are unknown, or are not regarded as perfectly honest and honorable, the medical man should either refuse to attend, or should take the precaution to obtain from the patient, before undertaking the management of his case, a bond covenanting not to sue for damages if deformity or permanent loss of use in a limb should follow the injury which he has been called upon to treat; or to stipulate in a simple contract that he shall not be held responsible for unskilfulness or negligence. Ordronaux, in his recent work,† maintains that "as the law does not consider the physician a guarantor of cures, and therefore does not hold him liable for inevitable results occurring in the natural course of diseases, no immunity bond can ever be necessary to him." Undoubtedly if the theory of the law were always carried out in practice, this observation would be absolutely correct. But the ends of justice are too often defeated by the inevitable imperfection of its instruments, and thus it happens that juries sometimes make very serious mistakes, and subject medical men to responsibility for something more than the exercise of ordinary and reasonable care and skill, by inability to discriminate between the injuries which flow from their agency and those which result from natural causes beyond their control, or from the misconduct of others. Ordronaux then says, in reference to these immunity bonds, that "such an instrument would in reality be worthless, because in its very nature against public policy. For it is against that spirit of equity which should regulate the transactions of mankind, to allow any one to contract for exemption from the legal consequences of his own wrongful acts; and to no other acts do legal consequences, in the nature of penalties, attach. Hence, no physician, by any special contract, can exonerate himself from responsibility for either not doing, or not doing well, his duty towards a patient." No adjudicated case or text book is cited in support of this doctrine by the learned author, and we think it cannot be upheld either on principle or authority. The writer evidently misapprehends the nature of the conditions which make an instrument void as being against public policy. The settled doctrine is that an agreement is not void on this ground, unless it manifestly contravenes public policy and be injurious to the interests of the State.‡ These interests, of course, are those of the masses of the community which cannot be legally interfered with by any of its members. But the law is in favor of the largest liberty to the individual, so long as it does not trench on the rights of others. It permits him to waive any of his legal rights, and if he enters into a contract with another to that effect, he will be held to its stipulations, unless they are detrimental to the welfare of the community. Such detriment must be clearly manifest to restrain a person from the exercise of that freedom of action which the law guards with jealous care. An act may clearly infringe the rights of another, and thus constitute a tort for which the wrong doer can be held responsible in damages, yet if the injured party who alone is prejudiced by such action chooses to exempt the tort feasor from legal liability, he can do so, and his contract of exemption constitutes a legal defence to the wrong doer who, in the absence of such special contract, would be liable for his tortious acts. This doctrine applies to all those cases of implied contracts where the law imposes responsibility, and a breach of which is technically a tort or wrong done to the other party to such contract. It is therefore applicable to the case of the medical man. As he is not bound to attend a person, his promise to do so is a good consideration for the patient's relinquishment or waiver of his rights, and an immunity bond being a sealed instrument, implies consideration. For mere negligence or want of ordinary skill he may legally exempt himself by a contract with the patient, who alone is affected by his wrong doing. This doctrine, that a wrong doer can exempt himself from responsibility, is only limited by those considerations of public policy to which we have adverted. If the medical man is not merely negligent or unskilful, but is guilty of misconduct which is so stamped with bad faith and fraud that it borders on criminal culpability, then, and not till then, does the law invalidate the contract which would otherwise exempt him from the consequences of those injuries to a patient which the latter agreed to overlook. It is here that private agreements are overruled by public policy.

The principles just enunciated have been applied by the courts in analogous cases affecting the rights of railway passengers. Although the law holds common carriers of passengers to a more rigid liability than is imposed on medical men, obliging them to take every person who can pay for a ticket, and exacting from them the utmost care and diligence, yet it has been held that railroad corporations can exempt themselves for injuries to a passenger resulting from their negligence, or that of their employées, by a notice to that effect printed on the ticket which forms the evidence of their contract with him, and are only liable for the fraudulent, wilful or reckless misconduct of their servants and agents.* This doctrine, as laid down by the New York Courts, has been sanctioned by Redfield in his recent work on Carriers and other Bailments.† Although in these cases the passenger was travelling on a free pass, yet the decision was based not upon this fact, but upon the special contract of exemption, and, indeed, the highest judicial tribunal in this country has decided in conformity to the doctrine to which we have adverted, that the liability of a railway company is the same whether or not there is any pecuniary consideration for such transportation. "The confidence induced by undertaking any service for another," said Mr. Justice Grier, in delivering the opinion of the Court, "is a sufficient legal consideration to create a duty in the performance of it."* It has often been said that the law recognizes no degrees in negligence, and the court in one of the New York cases just referred to, use the word as including all negligence, gross as well as slight, and pronounce the railway company's special contract as fully binding to the extent of exempting them from all loss or liability to loss or damage from injuries resulting from mere negligence—not arising from bad faith or fraud. And the phrase gross negligence, which is used in these cases to signify something from which no contract can exempt a party who has thereby caused injury to another, means fraudulent, wilful or reckless misconduct.† This would be *contra bonos mores*, and therefore condemned by the policy of the law.‡ It may be said, therefore, in conclusion, that although an immunity bond or other contract of exemption will not protect a medical man from the consequences of his wilful, reckless, or fraudulent misconduct, it constitutes a valid legal defence to a suit for malpractice based on mere unskilfulness or negligence from which a patient has suffered injury. It is another question, which it is not our province to determine, whether the requirement of such a contract of exemption is advisable under any circumstances. We certainly should not be in favor of any conduct in a medical practitioner which, as has been said of this, would be derogatory to his *dignity*. But genuine dignity does not depend solely upon externals. In its highest and primitive meaning it is synonymous with worth. No requirement which enables a professional man to legally protect himself, in order that he may do good to others, can conflict with real dignity, and whoever has that, need not trouble himself about the pretentious ceremonial which too often assumes its name. A great historian has said that he should cheerfully bear the reproach of having descended below the dignity of history if he could succeed in placing a true picture of the past before his readers. And a conscientious physician might in the same spirit abate a little of his artificial dignity in the interest of others as well as his own. "Certainly," says Ordronaux, "it is a derogation of his dignity and an attempt on his part to pervert the equitable streams of jurisprudence, to demand an instrument which shows upon its face that the physician has no confidence in his own skill, nor in the honesty of the patient. It is better far to refuse the case than to take it with such a defilement of the trust." These remarks assume that the contract of exemption is taken for an unworthy purpose, and they can only be justified by the writer's belief in the illegality of such agreements, which, as we have shown, is untenable. Assuming, as we do, their validity, no presumption of this kind can attach to them when used by a respectable practitioner.

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* Ashley *v.* Root, 4 Allen, 504.

† Jurisprudence of Medicine, p. 104. Phila. 1869. We cordially commend the manual of Prof. Ordronaux to the profession as embodying in a convenient form the essential principles of Medical Jurisprudence, and as supplying a real want in this department. In availing ourselves in these pages of some of the results of his investigations, we have had occasion to test the accuracy of his citations and the carefulness of his research, and can bear witness to his uniform correctness and fidelity.

‡ Chitty on Contracts, 10th Am. ed. p. 736, and cases cited. Thus although any contract which can prevent or impede the due course of public justice is invalid, yet the private rights of an injured party may be made the subject of agreement in cases where, by the previous conviction of the defendant, the rights of the public have been preserved inviolate. Ibid. pp. 742–743.

* Welles *v.* N. Y. Central Railroad, 26 Barbour, 641. Boswell *v.* Hudson River R. R., 5 Bosworth, 699.

† §350.

It should be borne in mind that we do not commend these contracts as intrinsically desirable, but only defend their use under certain circumstances on the score of necessity. It is easy for the city doctor rejoicing in a large and profitable practice to tell his rural brother to refuse a case rather than accept it with a proviso of exemption, which may be misinterpreted by an ignorant or suspicious patient or his friends. The answer to this is, that circumstances alter cases. It is no hardship for the successful city M.D. to take a case of this kind, as he can afford to stand a trial for malpractice which would probably result in his favor, and the expenses of which, in any event, he could easily bear. He can also decline to attend without any injurious consequences to himself, because it is impossible to meet all the calls upon his time, and the fact that he is obliged to turn away patients is only evidence of the public appreciation of his services. Nor will his refusal be construed as inhumanity, because he can either pass the patient over to some deserving young doctor, in need of practice, or send him to the Dispensary. Thus without any sacrifice on his part of benevolence or of his standing with the public, with its attendant pecuniary considerations, or of the welfare of the patient, he may take or refuse the risks against which a contract of exemption is intended to provide. But the country practitioner cannot well decline a call under like circumstances, because his refusal to attend might injure his professional prospects as well as work great injury to patients, who, if such a rule were adopted, would suffer from the lack of medical attendance. In the exercise of a sound discretion he may feel that he cannot afford to run the risk of a suit for malpractice, which, without fault on his part, may ruin him for life; from the inability of a jury when led away by the appeals of a skilful and perhaps unscrupulous lawyer to discriminate between the agency of the defendant and the misconduct of the patient or of his unprofessional attendants, or the influence of nature's imperfect reparation in occasioning the alleged deformity or other unfortunate result. Nor is the requirement of a bond of this kind a reflection on the honesty of the patient. Ignorance is proverbially suspicious, and a weak man is oftentimes more dangerous than a wicked one. The patient may be in the hands of ignorant or unscrupulous advisers, and in such a case he is easily persuaded to countenance a scheme of speculative litigation of which he is the unconscious instrument or the passive tool. It is the charity patient who is frequently the plaintiff in these cases, and the victim is often a poor man. If this is the penalty of benevolence, we have no reason to wonder at the so-called hardheartedness which is the popular term for the unwillingness of a medical man who has once passed through such an ordeal to attend a certain class of patients when the task is not only thankless but dangerous. A physician in large practice in the suburbs of this city, who is known and honored for his skilfulness, fidelity and kindness of heart, feelingly described to us, not a great while ago, the annoyance to which he was subjected in a suit of this kind by an Irish charity patient, in which his professional qualifications and conduct were commented on in a vein of depreciatory criticism by adverse counsel, and he was only saved from a disastrous verdict by the testimony of a Catholic priest who had vainly endeavored to dissuade his parishioner from prosecuting a groundless action. The physician said that he could'nt afford to take care of such patients. Thus the misconduct of one, may work serious injury to a great many. Our friend was able to bear the expense of a trial which would have crippled a small country practitioner, and he needed no favorable verdict to sustain him in the good opinion of his professional brethren and the public. But we speak for others less fortunate, though perhaps not less deserving, when we say that under such circumstances to avail himself of a mode of exemption, which the law allows, the medical man is only adopting a measure of precaution which subserves his interest and that of the public. It may be said that such a practice is liable to abuse, but this argument may be urged against every beneficial agency, and it should be borne in mind that no immunity bond or other contract of exemption can absolve the medical man from liability for wilful and fraudulent misconduct. Such a contract is not to be recommended for indiscriminate adoption, but the medical practitioner, in the exercise of a sound discretion, must determine whether necessity requires its use in any particular case. We may remark that this course has been commended by the first American editor of Taylor's Medical Jurisprudence* and in the columns of this Journal,† without, however, examining the legal bearings of the question, or considering the reasons for it in detail. The fact that it is not forbidden by the Code of Ethics of the American Medical Association, that may be presumed to have had it under review, affords an implication in its favor. We should not have deemed it necessary to discuss the question, had not the learned author of the Jurisprudence of Medicine expressed such decided opposition to these contracts of exemption as void in law, and derogatory to the honor and dignity of the medical profession. It is gratifying to believe that the necessity for such contracts is not so urgent as it was a dozen years ago, when the number of actions for malpractice brought against respectable practitioners caused a good deal of excitement in the medical profession. Most of these cases, we may add, were settled in favor of the defendants; and in view of the creditable conduct of juries and of the counsel for the plaintiff in some of these actions, the editors of this Journal were led to observe that suits for malpractice, although sometimes working injustice to individuals, are as beneficial to the profession generally as they often are to the accused.‡ But although it is easy to see, as was then intimated, that actions for malpractice tend to discourage quackery, and that the liability to such actions makes the number of quacks in surgery less than that in medicine, because the difficulty of proving unskilful treatment is greater in the latter case than in the former, yet the firmest opponents of quackery are sometimes discouraged in this way. It is surely not less important to protect an honest man than to punish a knave. There is a point when such suits would result unfavorably, by deterring honorable practitioners from encountering hazardous risks, and it is to meet cases of this exceptional character that contracts of exemption are desirable. Within these limits the medical man, under the salutary restraints which are imposed by his relations with his professional brethren and the public, may safely exercise a reasonable discretion.* Considering the intimate relations in which medical men are thrown with all sorts of people, it is a matter of surprise that actions for malpractice are not more common. As juries represent the average intelligence and discrimination of the masses, the ultimate remedy for such suits must be found in the increased skilfulness and fidelity of physicians, and the diffusion among the people of that physiological knowledge which will enable them, while holding the medical man to the high requirements of his position, to have a better appreciation of the inevitable limitations which hamper the best professional attention and ability.

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* Phila. & Reading Railway *v.* Derby, 14 Howard, 483.

† Welles *v.* N. Y. Central Railway, 26 Barbour, 645.

‡ Parsons *v.* Monteith, 13 Barbour, 360. Redfield on Carriers and other Bailments, § 365.

We have considered thus far the liability of medical men for malpractice in civil actions. In a future article we shall discuss their *criminal* liability in this respect, with reference to the leading cases which have attained to the dignity of *causes célebrès.*

Medical and Surgical Journal.

Boston: Thursday, June 9, 1870.

In placing at the head of the Editor's table the following poem, read by Dr. O. W. Holmes, at the recent dinner of the Massachusetts Medical Society, we attain the object of our hunger and thirst. We had failed to secure it by our own syren songs of persuasion, though attuned to their most dulcet notes. But the following letter from the poet's former friends in the profession in Berkshire was too much for his obduracy—and here we have it.

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* 6th Am. Ed., p. 304.

† Feb. 5, 1857.

‡ Boston Medical and Surgical Journal, Feb. 5, 1857.

* Another precaution which it is advisable for a surgeon to adopt when attending a patient of doubtful character, is to take a witness with him when he sets a limb, or performs any important operation, so that his actual treatment may be made clear to the jury, who otherwise might be misled by the unconscious or intentional misstatements of the patient or his friends. A brother surgeon who knows and can describe just what was done, is the best witness under such circumstances, for the medical experts on whose opinions the decision of the case may largely depend, will be able to judge of the propriety of the treatment from his account of it, better than from the testimony of an unprofessional observer. Care should be taken by the medical witness not to give advice or assistance to the attending surgeon, for he might thus subject himself to joint liability with him.

Pittsfield, Mass., June 3d, 1870.

Prof. O. W. Holmes:—

Dear Sir,—At the last meeting of the Berkshire District Medical Society, held at Pittsfield on Wednesday, June 1st, the following resolution was unanimously passed:—

"*Whereas*, We have heard from those members of our Society who were present at the Annual Dinner, in Boston, May 25th, of the remarkable excellence of the poem of Dr. O. W. Holmes,

"*Resolved*, That the Berkshire District Medical Society, through its Secretary, express to Dr. Holmes its earnest desire that the poem may be published, in order that every member of this Society, as well as the whole world, may have an opportunity to read and enjoy it."

In communicating to you this vote, my dear sir, allow me to add, that, although the Berkshire doctors have little doubt but that your poem will soon appear in print; yet, residing as they do in a county which remembers you with sincere affection, and meeting in a town which still loves to identify itself with you, and hearing your poem most enthusiastically described, they could not but make this request, deeming it most meet that the songs of their favorite poet should re-echo, as of old, among the sunny hills of Berkshire.

I remain with sincere respect, very truly yours,
J. F. Alleyne Adams, *Sec. pro tem.*,
Berkshire Dist. Med. Society.

RIP VAN WINKLE, M.D.

AN AFTER-DINNER PRESCRIPTION

Taken by the Massachusetts Medical Society, at their Meeting held May 25th, 1870.

Canto First.

Old Rip Van Winkle had a grandson, Rip,
Of the paternal block a genuine chip;
A lazy, sleepy, curious kind of chap;
He, like his grandsire, took a mighty nap,
Whereof the story I propose to tell
In two brief cantos, if you listen well.

The times were hard when Rip to manhood grew;
They always will be when there's work to do;
He tried at farming—found it rather slow—
And then at teaching—what he didn't know;
Then took to hanging round the tavern bars,
To frequent toddies and long-nine cigars,
Till Dame Van Winkle, out of patience, vexed
With preaching homilies, having for their text
A mop, a broomstick—aught that might avail
To point a moral or adorn a tale,
Exclaimed—"I have it! Now then, Mr. V.!
He's good for *something*—make him an M.D."!

The die was cast; the youngster was content;
They packed his shirts and stockings, and he went.
How hard he studied it were vain to tell—
He drowsed through Wistar, nodded over Bell,
Slept sound with Cooper, snored aloud on Good;
Heard heaps of lectures—doubtless understood—
A constant listener, for he did not fail
To carve his name on every bench and rail.

Months grew to years; at last he counted three,
And Rip Van Winkle found himself M.D.
Illustrious title! in a gilded frame
He set the sheepskin with his Latin name,
RIPUM VAN WINKLUM, QUEM WE—SCIMUS—know
IDONEUM ESSE—to do so and so;
He hired an office; soon its walls displayed
His new diploma and his stock in trade,
A mighty arsenal to subdue disease
Of various names, whereof I mention these:
Lancets and bougies, great and little squirt,
Rhubarb and Senna, Snakeroot, Thoroughwort,
Ant. Tart., Vin. Colch., Pil. Cochiæ and Black Drop,
Tinctures of Opium, Gentian, Henbane, Hop,
Pulv. Ipecacuanhæ, which for lack
Of breath to utter men call Ipecac,
Camphor and Kino, Turpentine, Tolu,
Cubebs, "Copeevy," Vitriol—white and blue,
Fennel and Flaxseed, Slippery Elm and Squill,
And roots of Sassafras and "Sassaf'rill,"
Brandy—for colics—Pinkroot, death on worms—
Valerian, calmer of hysteric squirms,
Musk, Assafœtida, the resinous gum
Named from its odor—well, it does smell some—
Jalap, that works not wisely, but too well,
Ten pounds of bark and six of Calomel.

For outward griefs he had an ample store,
Some twenty jars and gallipots, or more:
Ceratum simplex—housewives oft compile
The same at home, and call it "wax and ile";
Unguentum Resinosum—change its name,
The "drawing salve" of many an ancient dame;
Argenti Nitras, also Spanish flies,
Whose virtue makes the water-bladders rise—
(Some say that spread upon a toper's skin
They draw no water, only rum or gin)—
Leeches, sweet vermin! don't they charm the sick?
And Sticking-plaster—how it hates to stick!
Emplastrum Ferri—ditto *Picis*, Pitch;
Washes and Powders, Brimstone for the——which,
Scabies or *Psora*, is thy chosen name
Since Hahnemann's goosequill scratch'd thee into fame,
Proved thee the source of every nameless ill,
Whose sole specific is a moonshine pill,
Till saucy science, with a quiet grin,
Held up the Acarus, crawling on a pin?
—Mountains have labored and have brought forth mice:
The Dutchman's theory hatched a brood of—twice
I've well nigh said them—words unfitting quite
For these fair precincts and for ears polite.

The surest foot may chance at last to slip,
And so at length it proved with Doctor Rip.
One full-sized bottle stood upon the shelf
Which held the medicine that he took himself;
Whate'er the reason, it must be confessed
He filled that bottle oftener than the rest;
What drug it held I don't presume to know—
The gilded label said "Elixir Pro."

One day the Doctor found the bottle full,
And, being thirsty, took a vigorous pull,
Put back the "Elixir" where 'twas always found,
And had old Dobbin saddled and brought round.
—You know those old-time rhubarb-colored nags
That carried Doctors and their saddle-bags;
Sagacious beasts! they stopped at every place
Where blinds were shut—knew every patient's case—
Looked up and thought—the baby's in a fit—
That won't last long—he'll soon be through with it;
But shook their heads before the knockered door
Where some old lady told the story o'er
Whose endless stream of tribulation flows
For gastric griefs and peristaltic woes.

What jack o' lantern led him from his way,
And where it led him, it were hard to say;
Enough that wandering many a weary mile
Through paths the mountain sheep trod single file,
O'ercome by feelings such as patients know
Who dose too freely with "Elixir Pro.,"
He tumbl—dismounted, slightly in a heap,
And lay, promiscuous, lapped in balmy sleep.

Night followed night, and day succeeded day,
But snoring still the slumbering Doctor lay.
Poor Dobbin, starving, thought upon his stall,
And straggled homeward, saddle-bags and all;
The village people hunted all around,

But Rip was missing—never could be found.
"Drownded," they guessed;—for more than half a year
The pouts and eels *did* taste uncommon queer;
Some said of apple-brandy—other some
Found a strong flavor of New England rum.

—Why can't a fellow hear the fine things said
About a fellow when a fellow's dead?
The best of doctors—so the press declared—
A public blessing while his life was spared,
True to his country, bounteous to the poor,
In all things temperate, sober, just and pure;
The best of husbands! echoed Mrs. Van,
And set her cap to catch another man.

—So ends this Canto—if it's *quantum suff.*,
We'll just stop here and say we've had enough,
And leave poor Rip to sleep for thirty years;
I grind the organ—if you lend your ears
To hear my second Canto, after that
We'll send around the monkey with the hat.

CANTO SECOND.

So thirty years had past—but not a word
In all that time of Rip was ever heard;
The world wagged on—it never does go back—
The widow Van was now the widow Mac—
France was an Empire—Andrew J. was dead,
And Abraham L. was reigning in his stead.
Four murderous years had passed in savage strife,
Yet still the rebel held his bloody knife.
—At last one morning—who forgets the day
When the black cloud of war dissolved away?
The joyous tidings spread o'er land and sea,
Rebellion done for! Grant has captured Lee!
Up every flagstaff sprang the Stars and Stripes—
Out rushed the Extras wild with mammoth types—
Down went the laborer's hod, the schoolboy's book—
"Hooraw!" he cried—"the rebel army's took!"
Ah! what a time! the folks all mad with joy:
Each fond, pale mother thinking of her boy;
Old gray-haired fathers meeting—Have-you-heard?
And then a choke—and not another word;
Sisters all smiling—maidens, not less dear,
In trembling poise between a smile and tear;
Poor Bridget thinking how she'll stuff the plums
In that big cake for Johnny when he comes;
Cripples afoot—rheumatics on the jump,
Old girls so loving they could hug the pump,
Guns going bang! from every fort and ship—
They banged so loud at last they wakened Rip.

I spare the picture, how a man appears
Who's been asleep a score or two of years;
You all have seen it to perfection done
By Joe Van Wink—I mean Rip Jefferson.
Well, so it was—old Rip at last came back,
Claimed his old wife—the present widow Mac—
Had his old sign regilded, and began
To practise physic on the same old plan.

Some weeks went by—it was not long to wait—
And "please to call" grew frequent on the slate.
He had, in fact, an ancient, mildewed air,
A long grey beard, a plenteous lack of hair—
The musty look that always recommends
Your good old Doctor to his ailing friends.
—Talk of your science! after all is said
There's nothing like a bare and shiny head—
Age lends the graces that are sure to please,
Folks want their Doctors mouldy, like their cheese.

So Rip began to look at people's tongues
And thump their briskets (called it "sound their lungs"),
Brushed up his knowledge smartly as he could,
Read in old Cullen and in Doctor Good.
The town was healthy; for a month or two
He gave the sexton little work to do.

About the time when dogday heats begin,
Measles and mumps and mulligrubs set in;
With autumn evenings dysentery came,
And dusky typhoid lit his smouldering flame;
The blacksmith ailed—the carpenter was down,
And half the children sickened in the town.
The sexton's face grew shorter than before—
The sexton's wife a brand-new bonnet wore—
Things looked quite serious—Death had got a grip
On old and young, in spite of Doctor Rip.

And now the Squire was taken with a chill—
Wife gave "hot drops"—at night an Indian pill;
Next morning, feverish—bedtime, getting worse,
Out of his head—began to rave and curse;
The Doctor sent for—double quick he came:
Ant. Tart. gran. duo, and repeat the same
If no et cetera. Third day—nothing new;
Percussed his thorax—set him cussing, too—
Lung-fever threatening—something of the sort—
Out with the lancet—let him blood—a quart—
Ten leeches next—then blisters to his side;
Ten grains of calomel——just then he died.

The Deacon next required the Doctor's care—
Took cold by sitting in a draught of air—
Pains in the back, but what the matter is
Not quite so clear—wife calls it "rheumatiz."
Rubs back with flannel—gives him something hot—
"Ah!" says the Deacon, "that goes *nigh* the spot."
Next day a *rigor*—run, my little man,
And say the Deacon sends for Doctor Van.
The Doctor came—percussion as before,
Thumping and banging till his ribs were sore—
"Right side the flattest"—then more vigorous raps—
Fever—that's certain—pleurisy, perhaps.
A quart of blood will ease the pain, no doubt,
Ten leeches next will help to suck it out,
Then clap a blister on the painful part—
But first two grains of *Antimonium Tart.*
Last, with a dose of cleansing calomel
Unload the portal system——that sounds well!

But when the self-same remedies were tried,
As all the village knew, the Squire had died;
The neighbors hinted—"this will never do,
He's killed the Squire—he'll kill the Deacon too."

—Now when a doctor's patients are perplexed,
A *consultation* comes in order next—
You know what that is? In a certain place
Meet certain doctors to discuss a case
And other matters, such as weather, crops,
Potatos, pumpkins, lager beer and hops.
For what's the use?—there's little to be said,
Nine times in ten your man's as good as dead—
At best a talk (the secret to disclose)
Where three men guess and *sometimes* one man knows

The counsel summoned came without delay—
Young Doctor Green and shrewd old Doctor Gray—
They heard the story—"Bleed!" says Doctor Green,
"That's downright murder! cut his throat, you mean!
Leeches! the reptiles! Why, for pity's sake,
Not try an adder or a rattlesnake?
Blisters! Why bless you, they're against the law—
It's rank assault and battery if they draw!
Tartrate of Antimony! shade of Luke,
Stomachs turn pale at thought of such rebuke!
The portal system! What's the man about?
Unload your nonsense! Calomel's played out!
You've been asleep—you'd better sleep away
Till some one calls you"——
"Stop!" says Doctor Gray—
"The story is you slept for thirty years;
With brother Green, I own that it appears
You must have slumbered most amazing sound;
But sleep once more till thirty years come round,
You'll find the lancet in its honored place,
Leeches and blisters rescued from disgrace,
Your drugs redeemed from fashion's passing scorn,
And counted safe to give to babes unborn."

Poor sleepy Rip, M.M.S.S., M.D.,
A puzzled, serious, saddened man was he;
Home from the Deacon's house he plodded slow
And filled one bumper of "Elixir Pro."
"Good bye," he faltered, "Mrs. Van, My dear!

I'm going to sleep, but wake me once a year;
I don't like bleaching in the frost and dew,
I'll take the barn, if all the same to you.
Just once a year—remember ! no mistake !
Cry 'Rip Van Winkle ! time for you to wake !
Watch for the week in May when laylocks blow,
For then the Doctors meet, and I must go."

—Just once a year the Doctor's worthy dame
Goes to the barn and shouts her husband's name,
"Come, Rip Van Winkle !" (giving him a shake)
"Rip ! Rip Van Winkle ! time for you to wake !
Laylocks in blossom ! 'tis the month of May—
The Doctors' meeting is this blessed day,
And come what will, you know I heard you swear
You'd never miss it, but be always there !'"

And so it is, as every year comes round
Old Rip Van Winkle here is always found.
You'll quickly know him by his mildewed air
The hayseed sprinkled through his scanty hair,
The lichens growing on his rusty suit—
I've seen a toadstool sprouting on his boot—
—Who says I lie ? Does any man presume—
Toadstool ? No matter—call it a mushroom.
Where is his seat ? He moves it every year;
But look, you'll find him—he is always here—
Perhaps you'll track him by a whiff you know—
A certain flavor of "Elixir Pro."

Now, then, I give you—as you seem to think
We can drink healths without a drop to drink—
Health to the mighty sleeper—long live he !
Our brother Rip, M.M.S.S., M.D. !

SURGICAL ANÆSTHESIA AT THE HANDS OF SIR JAMES Y. SIMPSON.

THE present editor of the *British Medical Journal*—which is now in fact as well as in name the organ of the British Medical Association—in the number for May 14, 1870, gives an extended obituary notice of Sir James Y. Simpson. In the course of it we find these words, confirmatory of some points which have been made in these pages :—"In respect to the discovery of chloroform, Sir James has, as is well known, received from the public a far higher award than he claimed. The word chloroform has come to be considered synonymous with anæsthetics ; and the discoverer of chloroform has been too often spoken of as if he were the discoverer of anæsthetics. The real honor of the application of anæsthetics (suggested by Davy and others) belongs of course to America, and not to England, and to the dental branch of our profession." * * * *

"In the Boston Medical and Surgical Journal of about the same date [November, 1846] was an important paper by Dr. [H. J.] Bigelow, on cases in which ether had been used.

"The next number of Dr. Forbes's Review, April, 1847, had of course a long article devoted to the new discovery, which began with the following words :—" One of the most remarkable events in the history of medicine regarded as a practical art, is certainly that which has excited so much attention in Europe and America during the last four months—THE EMPLOYMENT OF THE VAPOUR OF ETHER AS A MEANS OF ABOLISHING PAIN in the practice of Surgery, Midwifery, and Medicine." The capitals in this quotation are those of the reviewer, and show clearly the importance which he attached to the discovery and its precise nature. As regards the extent to which the American [!] practice had come into use, the following extract from the same article is good evidence. "It is assuredly true that by means of the new process not a little of that dreadful suffering heretofore inseparable from the performance of most capital operations, has been abolished in the practice of the most eminent surgeons in Europe and America during the three or four months just elapsed."

Speaking of "Dr. Simpson," again the editor of the *British Medical Journal* says, "Thus it will be seen that he was a thorough convert to the practice of anæsthesia before he knew of chloroform, and had written in loud praise of ether." * * * Chloroform had been discovered by Damas in 1834.* In the beginning of 1847 Floureus experimented with it on animals. It was tried in the human subject by Simpson in the latter part of 1847. A paper on it was read by him to the Edinburgh Medico-chirurgical Society, November 10th. Its trial had been suggested to him by Dr. Waldie of Liverpool. Many others were working on the subject of anæsthetics ; and chloric ether had, indeed, we believe, been used in London before chloroform in Edinburgh. * * * The position of Sir James Y. Simpson in reference to anæsthetics may be easily stated. *He had of course no claim whatever to their introduction, nor is it probable that their general acceptance would have waited for his advocacy of their claims.*

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* The United States Dispensatory says "chloroform was discovered by Mr. Samuel Guthrie, of Sackett's Harbor, N. Y., in 1831, and about the same time by Soubeiran in France, and Liebig in Germany."—ED. B. M. & S. J.

Indeed, as we have seen, ether had come into a very wide use before chloroform was proposed."[*]

Mr. Jonathan Hutchinson, in a letter to the *London Medical Times and Gazette*, with reference to the deceased Baronet, says :—

" No one claims for him that he was exempt from human frailties, nor will any one acquainted with the facts doubt that the public has accorded to him a larger share of credit in reference to anæsthetics than was his due, and some will be ready with pain to admit that, at moments, he appeared to yield somewhat to the seductive temptation to accept praises which were offered in a degree of error. It is rather to his life's work that his friends appeal. They cite with confidence his zeal in medics, antiquarian research, his eloquent antagonism to quackery, his discoveries in therapeutics and operative surgery, and the great fact that a large part of his laborious career was devoted to subjects which had no relation to his practice, or to his own special part of the profession. His ten years' work at acupressure, if it be to end at last in failure, came as close as possible to a glorious success, and reflected the utmost credit on both his head and heart. For a time it seemed likely that it would be accepted by the whole medical profession. Lastly, his exertions to reduce the mortality of large hospitals were undertaken from a most noble motive, and will doubtless result in the greatest good."

MASS. CHARITABLE EYE AND EAR INFIRMARY. —The following operations requiring ether, are the principal ones performed at the Infirmary during the three months ending June 1st, 1870, generally in the presence of medical gentlemen as visitors.

Cataract	11
Iridectomy	12
Hernia iris	1
Passavant for posterior synechia	13
Cystoid cicatrix	1
Ext. Foreign Body	2
Paracentesis	5
Enucleation of globe	7
Staphyloma cornea	1
Pterygium	1
Scalping lids for trichiasis	5
Lengthening palpebral aperture for entropion	5
Entropion	2
Plastic on the lids	6
Rodent cancer of lids	1
Tumors	5
Strabismus convergent and divergent	21
Total	99

H. DERBY, M.D.,
F. P. SPRAGUE, M.D.,
B. JOY JEFFRIES, M.D., } *Attending Ophthalmic Surgeons.*
June 3, 1870.

CULTIVATION OF CINCHONA IN INDIA.—According to a recent report by the Assistant Superintendent of the Botanic Garden at Calcutta, the cinchona tree is successfully produced in Madras and Bengal. The number of plants at Darjeeling, on an area of 905 acres, exceeds 3,000,000, the increase during the past year being 673,654. The tallest plants grown there are nineteen feet high.—*Philadelphia Medical and Surgical Reporter.*

AQUA PUNCTURE.—Drs. Mallet and Pouillet have recently made comparative trials with water and solutions of morphia, injected subcutaneously. It was found that a few drops of clear water injected over the seat of pain was followed by relief; but that the effect of the water was a *little more* evanescent than that of the morphia solution.—*Richmond and Louisville Medical Journal.*

THE Secretary of War has appointed Surgeons S. A. McParlin, D. C. Huntingdon, and Van Buren Hubbard a Board to examine into the physical qualifications of members of the graduating class at West Point, and also the candidates for admission to the Academy.—*Philadelphia Medical and Surgical Reporter.*

DEATHS FROM CHLOROFORM.

In Berlin, last winter—not reported.—We learn of it through a private letter from a medical gentleman abroad to a medical friend here.

In the *Chicago Medical Examiner* Dr. Andrews records his belief that, in England and this country, probably not one-fifth of the deaths occurring from anæsthesia are published. The data which we have at hand are not sufficient to warrant any exact approximation of this proportion, but we are sure that very many deaths from chloroform are never made public. Our readers are already familiar with our views on the impropriety of the use of this anæsthetic.—*N. Y. Medical Journal.*

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[*] The italics are ours.—ED. B. M. & S. J.

Medical Miscellany.

Prognosis in Hepatic Abscess. — Dr. W. Stewart, in the *Lancet*, states as the result of a large experience in India, that where hepatic abscesses burst through the right lung, recovery is not uncommon under ordinary restorative and expectant treatment, while in cases where the discharge took place through other channels, "as into the transverse colon, stomach, etc., or externally through the parietes of the thorax or abdomen—whether naturally or by artificial opening," he has not met with a favorable termination. He hence concludes that "prognosis is favorable in uncomplicated cases, when the abscess makes its way through the lung. In such cases the abscess occupies the upper or convex portion of the liver, near the suspensory ligament; adhesive inflammation occurs on its outer surface; the diaphragm forms a part of the sac, and its substance is gradually removed by progressive absorption. If, at the same time, adhesion takes place between the diaphragmatic and pulmonary pleura, the abscess will open into the parenchyma of the lung, and be discharged more or less completely by expectoration. In such ceses, the matter may escape by a small opening directly into a bronchical tube, or filter through immeasurably small orifices into the air-cells; and the process of filtration and aspiration, if I may so express it, following on the respiratory acts, may be the reason why such abscesses do not have an unhealthy action—ordinary atmospheric air carrying 'septic germs' being excluded—the products of respiration alone taking the place of the expectorated matter, and being continually renewed by the same process."—*New York Medical Gazette.*

In consequence of the troubles which arose in the lecture room of Prof. Tardieu, the minister of public instruction, upon the demand of the professors, suspended the lectures and examinations until the 1st of May. This disciplinarian measure has not been applied to Marine Surgeons, who, says the *Official Journal*, took absolutely no part in the disorderly conduct, and who came to Paris to pass their examinations. Why was this principle not applied to the internes of the provincial hospitals, who came to Paris for the same purpose?

The *Union Médicale* says that the troubles of the Ecole de Médecine may be considered at an end. M. Tardieu delivered his course recently before a calm and attentive audience. Measures had been taken that none but students of the fourth year should have access to the amphitheatre. They numbered three hundred.—*Exchange.*

The number of deaths in Paris from smallpox is daily increasing. From the 17th to the 23d April there were 132 deaths, and 166 from the 24th to the 30th. These results are surprising in view of the great number of revaccinations which have taken place within four or five months past; the documents presented to the Academy by M. Vernois would lead one to impute the numerous cases of unsuccessful revaccination to vaccine taken from the animal, and to find in this fact the principal reason for the growing increase of the actual epidemic. It is therefore more urgent than ever to return to the vaccine of Jenner.—*Ibid.*

The readers of the Journal, we are sure, will excuse any delay in the issue of this number, in view of the largely additional and exceedingly interesting matter with which it is filled.

Members of the profession interested in Diseases of the Eye are invited to visit the Ophthalmic Clinique of the Boston City Hospital, at their convenience, on Mondays, Wednesdays and Fridays, from 9 to 11 o'clock.

Henry W. Williams, M.D., *Oph. Surgeon.*

To Correspondents.—Communications accepted.—Mayor Shurtleff's Address—Acupressure and Sir J. Y. Simpson.

Erratum.—On page 385, in our issue for May 19, in speaking of Prof. Boeck, for "belief" read *disbelief.*

Married,—June 1st, 1870, Geo W. Rossman, M.D., of Ancram, N. Y., to Miss Frank N. Green, of Amenia, N. Y.

Died,—In Lowell, June 3d, Dr. J. P. Jewett, a graduate of the Medical Department of Dartmouth College in the class of 1835, aged 62 years.

Deaths in fifteen Cities and Towns of Massachusetts for the week ending June 4, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases. Consumption.	Prevalent Diseases. Pneumonia.
Boston . . .	96	14	13
Charlestown	7	2	0
Worcester . .	24	8	1
Lowell	20	1	2
Milford	4	1	0
Chelsea	4	1	0
Cambridge . .	16	2	1
Salem	6	2	1
Lawrence . . .	8	2	2
Springfield .	2	1	0
Gloucester . .	6	1	1
Fitchburg . . .	6	1	0
Taunton . . .	7	2	0
Newburyport.	4	2	0
Fall River . .	9	1	1
	219	41	22

From information recently received there is reason to believe that in many towns of Massachusetts vaccination has been much neglected of late years, and that consequently large numbers of persons are now exposed to danger from smallpox. This disease is now epidemic in the city of Worcester, where it caused three deaths during the past week. Six deaths from croup and four from scarlet fever are reported from all the above-named places.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending June 4th, 96. Males 49—Females 47.—Abscess, 2—accident, 3—disease of the bladder, 2—congestion of the brain, 2—disease of the brain, 1—bronchitis, 2—cholera infantum, 2—consumption, 14—convulsions, 2—croup, 3—cyanosis, 1—debility, 5—diarrhœa, 1—dropsy of the brain, 2—erysipelas, 1—scarlet fever, 1—typhoid fever, 3—gastritis, 1—disease of the heart, 4—intemperance, 2—disease of the kidneys, 2—inflammation of the lungs, 13—marasmus, 2—measles, 1—old age, 2—pleurisy, 1—premature birth, 4—rheumatism, 1—scrofula, 1—suicide, 1—tetanus, 1—tumor, 1—unknown, 10—whooping cough, 1.

Under 5 years of age, 39—between 5 and 20 years, 9—between 20 and 40 years, 21—between 40 and 60 years, 14—above 60 years, 13. Born in the United States, 64—Ireland, 28—other places, 4.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

HYDRATE OF CHLORAL, WITH CASES ILLUSTRATING ITS ACTION.

By Edward H. Clarke, M.D., Professor of Materia Medica in Harvard University.

Chloral was discovered by Liebeg in 1832. Its chemical properties were more fully investigated by Dumas in 1834. It was afterwards studied by MM. Regnault, Kopp and Wurtz. It was known, however, chiefly or only to chemists, and regarded by them more as a curiosity than an article of value, till M. Liebreich, of Berlin, introduced it in the form of hydrate of chloral into therapeutics. Since then its physiological and therapeutical action has been investigated by MM. Bouchut, Bricheteau and Demarquay of France, Dr. B. W. Richardson, J. B. Russell, of England, Dr. William A. Hammond of New York, DaCosta of Philadelphia, and others both in this country and Europe. It has been tried both in hospitals and in private practice. On the whole, the verdict of the profession is in its favor. Its probable value as a therapeutic agent is such that clinical observations with regard to its action in disease are interesting and important. It is moreover interesting as an admirable illustration of the close alliance between the chemical constitution, the physiological action and the therapeutical use of drugs. This alliance is becoming every day more apparent, and the time is not far distant when it will be generally recognized by the practising physician, and constantly guide him in the art of prescribing.

Chloral, from which the hydrate is made by the addition of water, is described by Dr. Benj. W. Richardson, the distinguished London physician and physiologist, as "an oily liquid, colorless, and of pungent odor. It is an irritant to the skin. Its specific gravity is 1500 as compared with water at 60°; its vapor density is 74 compared with hydrogen as unity; and its boiling point is 99° Cent.—210° Fahr."[*] It is made by treating anhydrous alcohol with chlorine.

The hydrate of chloral is made by combining chemically water and chloral. This is described by Dr. Richardson, in the article just quoted, as a "white, crystalline substance. The crystals are rhombic. In the formation of the hydrate, about eight parts of chloral combine with one part of water, forming nine parts of the crystalline substance. Hydrate of chloral, therefore, contains 90 per cent. of chloral. The hydrate, although a solid, volatilizes like camphor without decomposition. It dissolves in water so freely that a saturated solution contains 50 per cent. It dissolves also in alcohol and ether." We learn from the same authority that when it is acted upon by an alkali, as potassa, soda or ammonia, it is decomposed into a formate and chloroform. If any quantity of potassa is added to a solution of hydrate of chloral, a corresponding amount of chloroform is evolved. The presence of the latter agent may not only be detected by the milkiness of the fluid, but by the characteristic odor of chloroform. This fact of the evolution of chloroform from the hydrate of chloral, when the latter is put in contact with alkalies, is an important practical one to the physician. It not only indicates the impropriety of uniting an alkali with the hydrate of chloral in prescriptions, but it points to the most probable explanation of its physiological action. Some account of this action will form an appropriate introduction to the clinical observations that follow.

Physiologists have experimented with hydrate of chloral upon all classes of animals. Its action has been studied on fishes, frogs, rabbits, cats, mice, dogs, pigeons, and I know not how many other living creatures as well as man. Upon all of them it exerts a certain similarity of action, though with some curious differences. When fishes are put into water sufficiently charged with it, they absorb it by inhalation, grow sluggish and presently fall asleep. Frogs fall asleep by the subcutaneous injection of half a grain; they are apt to be killed by three-quarters of a grain, and are sure to be killed by more than the latter dose. A quarter of a grain will put a mouse into a sound sleep. Rabbits come easily under its influence, whether given by the stomach or subcutaneously, and may be put into a gentle sleep, or narcotized or killed by it, at the will of the experimenter. Pigeons, that according to Weir Mitchell,[*] tolerate enormous doses of opium with impunity, are easily narcotized by hydrate of chloral. Cats come readily under its influence, and when subjected to it they are said to purr with obvious comfort as they go to sleep.

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[*] London Medical Times and Gazette for Oct. and Nov., 1870.

We learn from the admirable researches of Dr. Richardson,[†] that the sleep induced in all sorts of animals by hydrate of chloral resembles natural sleep. Recovery from this sleep is unattended with any apparent derangement of the system. The drug may be administered in doses just large enough to produce this sort of natural sleep, or in doses large enough to produce a dangerous degree of narcotism, or in doses that shall rapidly prove fatal. In other words, the hydrate of chloral is to animals a pleasant and harmless anodyne, or a dangerous narcotic, or a rapid and fatal poison, according to the dose in which it is given. In this respect its action on animals resembles its action on man. When death is produced, the heart seems to be the ultimum moriens. The circulation may be seen going on in the web of a frog's foot, when the animal is so profoundly under the influence of the drug as to appear dead.

Muscular relaxation, complete anæsthesia, absence of reflex movements and reduction of animal temperature, in varying degrees, dependent upon the doses given, accompany the narcotism of hydrate of chloral. An apparent hyperæsthesia has sometimes been noticed, especially by M. Demarquay, but it is an occasional and exceptional phenomenon.

A knowledge of the physiological action of the hydrate of chloral on man is an indispensable guide to its use in disease. We do not yet comprehend this action completely, but we know enough of it to aid us materially in its clinical administration. The points of greatest importance to the practitioner are its absorption, its elimination, the changes which it undergoes in its progress through the system, and its action on the system from the period of absorption to that of complete elimination.

1st. *Absorption.* Hydrate of chloral is readily absorbed by the mucous surfaces of the stomach and rectum, and also by the cellular tissue. For absorption by the latter tissue it should be administered by subcutaneous injection. This procedure, on account of the local irritation which it induces, is not one to be recommended. The ordinary method of giving it by the stomach is the best. If concentrated when thus given, it produces local irritation and nausea, and is apt to be thrown off. It is easily and quickly absorbed from the stomach if largely diluted. I have usually found that a solution stronger than a grain of the hydrate to a drachm of water will produce gastric uneasiness. When diluted to this or to a greater extent, it is well tolerated by the stomach. If a moderate dose is given, viz. one of thirty grains or less, it is probable that the whole of it is absorbed in a few minutes. In the first of the following cases, the hypnotic effect was produced in ten minutes after the administration of the drug. As the dose of it in that case was only fifteen grains, it is fair to infer that the whole, or nearly the whole, of the quantity given passed from the stomach into the blood within that space of time. The stomach appears to be capable of passing into the blood any quantity of hydrate of chloral that may be put into it, provided that the article is pure and sufficiently diluted. Hence any quantity of it may be given at a dose, so far as the stomach is concerned, that it is wise to administer. The presence of food in the stomach would be likely to delay its absorption. Any irritation of the stomach, like gastritis, would probably render that organ intolerant of it, though I have never proved this by experiment. The absorption of the hydrate of chloral by the stomach, then, is easily and quickly induced when it is given largely diluted upon an empty stomach whose mucous membrane is in a normal condition.

2d. *Progress through the System.*—The hydrate of chloral goes from the stomach into the blood unchanged. In the blood it meets with an alkali. The experiments of Dr. Richardson and others show that the hydrate of chloral in contact with an alkali is decomposed and chloroform evolved. Indeed, chloroform has been obtained from the vapor arising from a mixture of freshly drawn blood and hydrate of chloral.

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[*] Am. Jour. Med. Science, Jan., 1870.

[†] London Med. Times and Gazette, Oct. and Nov., 1870.

We have the authority of Liebreich for stating that when the hydrate meets with an alkali in the blood, it behaves as it does when it meets with alkalies out of the system. That is, as soon as hydrate of chloral reaches the blood by any avenue, it commences to yield chloroform. The amount of chloroform thus given to the blood is proportionate to the quantity of chloral absorbed and also to the alkalinity of the blood. The total quantity of chloral absorbed is not immediately decomposed into chloroform. The drug mixes with the blood, passes with the blood to every part of the organism, and, as it circulates, continues to yield chloroform until it is exhausted. In cases of fever of a low type, such as typhus and typhoid fever, when the blood is highly charged with ammonia, that fluid is in a state to extract chloroform from chloral more rapidly than when it is less alkaline. Under such circumstances a given dose of hydrate of chloral should produce its physiological action more rapidly and powerfully than it ordinarily does. Since writing these words I have met with the clinical experiments of Dr. J. B. Russell* with the hydrate in typhus fever, at the Glasgow Fever Hospital, and these indicate that such is the case. Doubtless other substitution compounds than chloroform result from the decomposition of hydrate of chloral in the blood, and exert more or less influence on the organism till they are eliminated from it. What these compounds are, and what their physiological action is, cannot yet be stated. It is probable that some of the physiological actions of the drug we are considering are due to these compounds. Until they are discovered and their effects known, a complete solution of the problem of the physiological action of hydrate of chloral is impossible.

The above theory of the decomposition of hydrate of chloral in the blood into chloroform, not all at once, but with comparative slowness, particle by particle, just as fast as a particle of chloral meets with a sufficient quantity of an alkali, is that of Liebreich. It is a beautiful and ingenious theory, and one that seems to me justified by physiological experiment and clinical observation. The chloroform, yielded by the chloral to the blood, of course behaves in that fluid just as the same amount of chloroform would do if it were passed into the blood at the same rate by any other process. Hence hydrate of chloral, according to its dose, may be soporific, anæsthetic or dangerous because it yields chloroform. But it is not probable that in moderate doses it will ever prove dangerous, because in such doses the chloroform evolved will be eliminated too rapidly to be so.

The hydrate of chloral, then, passes rapidly from the stomach into the blood unchanged. In the blood it is decomposed into chloroform, and perhaps into other compounds also. These substitution compounds continue to circulate with the blood throughout the organism, until they are oxidized in it or eliminated from it.

3d. *Elimination.*—Most, if not all, of the hydrate of chloral is eliminated from the system in the form of chloroform, into which it has been changed. Dr. Richardson states that he has detected the odor of chloroform in the breath of animals sleeping under the influence of chloral. Messrs. Lallemand, Perrin and Duroy* have shown that chloroform is eliminated chiefly by the pulmonary mucous surface. They have also shown that when it is rapidly introduced into the organism it is more rapidly eliminated than when it is slowly introduced. When it is slowly introduced, at least an hour and a half is required after the introduction of the last dose ; that is, after the last quantity of it has been inhaled, for its complete elimination from the blood. So far as we know at present, the elimination of the hydrate of chloral is the same as the elimination of chloroform slowly introduced into the blood. So much of the hydrate as has been changed into chloroform is eliminated by the pulmonary mucous surface in an hour and a half, or less, after its absorption. When, therefore, it is desirable to keep the blood charged with the hydrate of chloral continuously, it should be given at intervals of not more than two hours. If this is undesirable, a second dose should never be administered until sufficient time has elapsed for the elimination of the first. The practitioner should select one or the other of these modes of administration, in accordance with the therapeutic object he has in view. How any of the other substitution compounds of the hydrate of chloral are eliminated, we do not yet know. They are probably oxidized in the organism.

4th. *Action on the System.*—Hydrate of chloral, while in the system, affects especially the blood, the cerebro-spinal axis, the heart and arteries, the muscular system, and the temperature.

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* Glasgow Medical Journal, Feb., 1870.

* Du Rôle de Alcohol et des Anesthesiques dans l'Organisme, p. 350, etc.

When a single therapeutic dose of chloral is administered, it passes into and out of the blood without producing any chemical change in that fluid. If the dose, however, is so large as to be a toxicological one, the blood undergoes a change. It becomes, as we learn from Dr. Richardson's experiments, less coagulable, and its corpuscles become shrunken and crenate; it is in fact devitalized. In this respect, the action of chloral on the blood resembles that of large or long continued doses of ammonia or potash. If chloral were administered in therapeutic doses for a long time, and with such short intervals between each dose, that its complete elimination from the blood, for at least a portion of each twenty-four hours, were rendered impossible, a devitalization of the blood would doubtless result. That such is not the case, provided chloral is given so as to allow for its daily complote elimination, we learn from clinical observation. Cases II., V. and VI. that follow are illustrations in point, for the patients there described took hydrate of chloral daily for many weeks, without loss of flesh, color, strength, appetite, or other ill effects. I have said that in this respect the action of chloral on the blood resembles that of alkalies. Alcohol would have been a better illustration; for alcohol administered in therapeutic doses, for a long period, with such intervals between them, that the blood may be completely freed from it during a portion of each twenty-four hours, does not change the character of the blood; while it does change and devitalize the blood, if its daily and complete elimination is not provided for.

The physiological action of chloral on the cerebro-spinal system indicates its chief value in therapeutics. My own observation confirms the statement of M. Bricheteau* that this action "is manifested by a period of agitation, more or less pronounced, sometimes very short, and not of importance; by a period of progressive somnolence, in which consciousness is first dulled and then extinguished under a profound sleep, accompanied by a slight or a complete anæsthesia, according as the drug is pure and given in a sufficient dose; and in some individuals, by a sort of intoxication, resembling drunkenness at the moment of awakening." Sleep and a certain amount of anæsthesia are two marked effects of therapeutic doses of chloral. Profound sleep and complete anæsthesia are the result of toxic doses. The sleep of a therapeutic dose is strikingly like natural sleep. The limbs lie in natural attitudes. The respiration is easy. The skin is normal, or a little cool. The pupils of the eyes are contracted, but easily dilate. A sufficient noise or disturbance arouses the sleeper, who asks what is the matter, and directly falls asleep again. The patient of Case II. was constantly anxious about an aged and invalid father, who slept in the chamber below her. Any unusual noise in that chamber at night always aroused her from her chloral sleep; she would leave her bed, go below for a moment, investigate the cause of the disturbance, return to her bed and at once fall asleep again. The duration of the sleep varies from two or three to six or eight hours, according to the dose and to the impressibility of the subject.

Complete anæsthesia is not produced by hydrate of chloral on man, unless doses that approach or really are toxic ones are given. Therapeutical doses produce a moderate insensibility, and therefore may be used to allay a moderate amount of pain, but they will not replace opium in this respect. The order in which the nervous system is affected by therapeutic and toxic doses is stated by Dr. Richardson to be as follows. Therapeutic doses affect, 1st, The sympathetic ganglia. 2d, The cerebrum. 3d, The heart. In fatal cases, "the functions destroyed are, 1st, The cerebral. 2d, The voluntary muscular. 3d, The respiratory. 4th, The heart."

The action of the heart is often quickened soon after chloral is absorbed, but in a short time the quickened action gives place to a slower and weaker movement. It is the rule for therapeutic doses to decrease the frequency and force of the heart's beat. In nine observations made by DaCosta,* in one of which ten and in the rest fifteen grs. were injected hypodermically, the following result was obtained. In five cases the pulse fell in an hour from 90 to 78—104 to 86—96 to 82—96 to 44 and 100 to 96. In two cases the number of beats was unaltered; and in two it was increased from 60 to 64, and from 80 to 84. M. Bouchut, DaCosta and Dr. Anstie agree that the sphygmographic trace of the chloralized pulse is sinuous with a diminished rise and fall. Toxic doses render the pulse quick and small, and contract the arterioles, sometimes, says Dr. Anstie, "to the extent of strong spasmodic contraction."

The condition of the cerebral bloodvessels, while under the influence of hydrate of chloral, varies with the dose and with the length of time after its administration. Dr. W. A. Hammond has demonstrated[*] by several ingenious and interesting experiments, that the primary effect of a full therapeutic dose is to cause congestion of these vessels; while the secondary effect is to induce the opposite condition. He has also shown that a small dose produces only congestion of the cerebral vessels. Such a dose is probably eliminated before there is time for secondary results to occur.

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* Bulletin de Therapeutique, Nov. 1869.

* Amer. Jour. Med. Sciences, April, 1870, p. 361.

Animal temperature is lowered by chloral, if a sufficient dose is given. In all but one of DaCosta's cases just referred to, the temperature either fell slightly or was unaffected. In one case it rose from 99° to 100°·5. Bricheteau noticed the decrease of temperature. Dr. Richardson has confirmed it by fifty carefully conducted experiments. A comparison of the results arrived at on this point by these and other observers, however, points to decrease of temperature as the accompaniment of a toxic rather than of a therapeutic dose. An attempt to largely lower the animal temperature by chloral would be a dangerous experiment. I agree with M. Bricheteau that "the loss of one degree (centigrade) of temperature in an hour by the action of chloral would alarm me, if it occurred in one of my patients."

Under the influence of therapeutic doses of hydrate of chloral, the respiration is slowed as well as the action of the heart, but not to any great degree. Muscular relaxation also occurs.

Therapeutic Indications.—The therapeutic indications and contra-indications which these physiological phenomena point to, are obvious. Hydrate of chloral may be given so as to produce sleep, diminish sensibility, allay irritation, slow the heart, relax muscular tissue, lower animal temperature, devitalize the blood, cause anæsthesia and destroy life. Part of these phenomena have a therapeutic value, and part are toxic. They may be arranged in two groups, thus:—

Therapeutic Group.	Toxic Group.
Sleep.	Slow or irregular pulse.
Diminished sensibility.	Complete anæsthesia.
Diminished irritation.	Altered blood globules.
Muscular relaxation.	Great diminution of temperature.
Contraction of arterioles.	Great muscular relaxation.
	Death.

In the administration of chloral, the practitioner of course desires to obtain the therapeutic and avoid the toxic phenomena. This can easily be done by a proper attention to the purity of the article and to the mode of its administration. The indications to produce sleep, diminish sensibility and allay irritation, occur very often in the treatment of disease. Hence it is not surprising that chloral has been tried clinically in a great variety of diseases. Dr. James B. Russell has given, in the *Glasgow Medical Journal*, a table of 21 cases (of fever, previously referred to) in which he employed it. M. Bricheteau, in the *Bulletin de Thérapeutique* for November, 1869, has recorded the result of his experience of it in nephritic colic, extraction of teeth, chorea and tetanus. Dr. DaCosta, in an article in the *American Journal of the Medical Sciences*, quoted above, has presented a record of its use in lead colic, rheumatism, cerebral softening and abdominal tumor. Dr. F. Goolden tried it in paralysis; Dr. J. H. Barnes and Dr. Hammond in acute mania; Dr. S. Teller in puerperal mania; Dr. Hay (*Practitioner*, March, 1870) in puerperal convulsions; Dr. Hardy in neuralgia; Dr. H. Derby in iritis; and this article concludes with an account of its use in phthisis, insomnia, paralysis agitans, opium eating, hysteria, and cardiac disease.

The contra-indications to the use of the hydrate of chloral have not yet been fully ascertained. Its physiological action on the heart is such as to render one very cautious about administering it in cardiac affections. In Case VIII. of the following series, pain in the cardiac region and fluttering of the heart followed so directly after the taking of chloral that I could not doubt its action on that organ in that case—an action which no physician would care to push farther. The experiments of Dr. Hammond show that it is not safe to prescribe it in all forms of disease of the head. Organic disease of the heart, congestion of the brain, meningitis, and very probably cerebral anæmia, contra-indicate its use. An irregular pulse, and a cold skin, occurring soon after the exhibition of chloral, are signs of danger. Dr. J. R. Reynolds, in the *Practitioner* for March, 1870, records a case in which a dose of 45 or 50 grs. was followed in two hours "with cold extremities; an excessively rapid, weak, irregular and intermittent pulse; jactitation of limbs; an intolerable sense of sinking and oppression at the pit of the stomach; gasping breathing and confusion of thought." These symptoms disappeared as stimulants were given, and the patient rescued from imminent danger.

Dose and Mode of Administration.—In the first place, before giving hydrate of chloral at all, the physician should be assured of the purity of the article. I have experimented clinically with hydrate of chloral of English, German, French and American manufacture. In my hands the English has proved to be the best—the most agreeable to the taste of patients, accompanied with little or no nausea, and followed by no ill effects. The German and French article has caused some nausea and slight cerebral disturbance. I am sorry to add, that I have never given a dose of American chloral which has not produced a great degree of nausea, and been followed for twelve or twenty-four hours by headache and cerebral uneasiness. Chemists tells us that the hydrate of chloral is not pure unless, when added to a solution of caustic potash, it will disengage the odor of chloroform without coloring the solution. Coloring the solution indicates impurity.

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[*] New York Medical Journal, Feb. 1870.

The average dose for an adult is 30 grs. A decided hypnotic effect is produced in some impressible individuals by 15 grs. It is not safe to exceed the dose of 60 grs. in the course of ten or twelve hours. I have noticed that 30 grs., given in two doses of 15 grains each, half or quarter of an hour apart, will produce less gastric uneasiness and greater hypnotic action than when given in a single dose. Theoretically, in consequence of the rapid elimination of the chloroform evolved from the chloral in the blood, such should be the case. It may be administered by the stomach or by the rectum, and it is not necessary to give a larger dose by the latter than by the former method.

M. Claude Bernard has shown* that less chloroform is necessary to produce anæsthesia in an animal or a man previously narcotized by morphia, than in one to whom morphia has not been previously given. I have observed, clinically, that there is a similar mutual action between hydrate of chloral and morphia. Case VI., which follows, is an illustration of this fact. A fourth of a grain of one of the salts of morphia, followed in an hour by 15 or 20 grs. of hydrate of chloral, will produce a greater anæsthetic and hypnotic effect than a larger dose of either of them given alone. In many cases, where a certain dose of morphia is sufficient to allay pain, but not to produce sleep, it is better to follow the morphia by hydrate of chloral than to repeat the former.

In concluding this account of the physiological and therapeutical action of chloral, I cannot express my opinion of it more clearly than to quote the words of Dr. DaCosta in the paper previously referred to, viz.: "that it is an important addition to our therapeutic means—chiefly, however, as a hypnotic. Its action as a destroyer of pain is limited; nor do I think it can compete with ether or chloroform to produce the insensibility requisite for surgical operations. Its chief value seems to be that of an auxiliary to opium, or to take its place when opium is not admissible." As a hypnotic, hydrate of chloral is better than opium. Chloral sleep is better than opium sleep.

The following cases illustrate most of the physiological actions of therapeutic doses of hydrate of chloral which have been pointed out.

Case I. *Insomnia.*—An old gentleman of more than 80 years of age had an acute bronchitis in the summer of 1869. He got well, and in the following autumn had a second attack of the same disease, and recovered from this. During the winter of 1869–70, he suffered from an irritable bladder, which tormented him for two or three months and then got well. In consequence of these various attacks he became weak, and lost appetite and flesh. His nights were often restless, and he frequently required some form of opium in order to obtain sleep. It was not necessary to give him a large dose. Twenty drops of tinctura opii deodorata, or an eighth of a grain of the sulphate of morphia, were generally sufficient to enable him to get a requisite amount of sleep. Hyoscyamus, camphor, hops, &c., were tried without effect. Opium gave him sleep, but it also gave him a coated tongue and constipation of the bowels. It did not seem to diminish his appetite or disorder his stomach. I discontinued the opium and gave him fifteen grs. of chloral hydrate in three ounces of syrup tolu and water. This gave him several hours of quiet and apparently natural sleep. The same dose was repeated for a number of nights, with the same result. It was discontinued after a while, because he got well enough not to require any anodyne. This person came very quickly under the hypnotic influence of chloral. He fell asleep so soon after he swallowed it that I had the time measured, and found that, in one instance at least, he was asleep in less than ten minutes after he had taken it. He complained of no nausea, either at the time of taking it or on awaking. It did not seem to inconvenience him in any way. All the anodynes I tried him with, except opium and chloral hydrate, failed to induce sleep. Of these two, the latter served him much the best. The smallness of the dose in this case is worthy of remark. Perhaps at the age of 80 a smaller dose should be given than when a patient is 20 or 30 years younger.

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* Bulletin de Thérapeutique, Septembre, 1869.

Case II. *Insomnia.*—A lady, between 50 and 60 years of age, received a blow on her head ten or twelve years ago, by which the skull was depressed. The surgeons who were called did not think it safe or necessary to trephine the skull. She got well without any surgical operation. Since the accident her head has frequently disturbed her in the way of headache, sense of cerebral oppression, vertigo and the like, though on the whole she has enjoyed a tolerable degree of health, and been able to attend to her usual household duties. The principal difficulty has been insomnia. She has not been able to sleep more than three or four hours at night. She reports her average sleep for the last ten years at three hours per night, and no sleep by day. After several nights of three or four hours sleep each, there would be a night of four or five hours sleep, and so on. All sorts of anodynes have been tried with her, such as hyoscyamus, opium, camphor, lupulin, ether, ardent spirits, Indian hemp, bromide of potash, &c. Of these, whiskey and Indian hemp produced the best results in the way of sleep. The bromide of potash did not cause sleep, and was followed by an intolerable sense of weight and discomfort in the head, and also by mental depression for many hours after it was taken. For the last few years none of these anodynes have been employed. The patient has got on with such sleep as came to her, unassisted. On the 13th of January last, I gave her twenty grains of chloral hydrate, which seemed to act favorably, but did not produce much increased sleep. The dose was increased each night till 50 grs. were taken. This was followed by five hours of quiet, easy and apparently natural sleep. From that date to this present writing, she has taken 50 grs. of chloral, in divided doses, every night, except a few nights, when it was discontinued to see what the result would be. When it was discontinued, she slept only three hours as before. On the other nights she has always slept five or six hours. She has complained of no sort of discomfort, either directly after taking the hydrate or at any other time. There is one exception to this statement. She took some hydrate of American manufacture a few times, which was invariably followed by nausea for half an hour or more, directly after swallowing it, and by headache the next day.

Case III. *Phthisis.*—Miss S., a young girl of 16, with the hectic, emaciation, cough and diarrhœa of advanced tuberculosis, during the past winter was especially troubled by her cough at night. It assumed an irritable and spasmodic character as soon as she lay down. Unfortunately, she did not tolerate opium well. I gave her ten grs. of chloral hydrate, and the dose was sometimes, not often, repeated once or twice during the night, so that she got (either 10 grs. or) from 10 to 30 grs. of chloral, in divided doses, during each night. The result was excellent for several weeks. The cough was quieted by each dose, and refreshing sleep followed, which generally continued about two hours. After a few weeks, the taking of the above amount of chloral was not followed by relief from coughing or by sleep. An increased dose produced nausea, and the drug was discontinued. In the case of this patient, the rapidity with which sleep was induced was as remarkable as in the first case.

Case IV. *Hysteria.*—Miss T., æt. 47, has been subject for several years to neuralgia in various parts of the body, and to chronic inflammation of the ovaries. She has also had frequent hysterical symptoms and general nervous derangement. One of her most prominent difficulties has been, for the past few years, sleeplessness. When troubled in this way, the bromide of potassium formerly produced quiet sleep. During the past year, however, I have abstained from giving it to her, partly because it did not quiet her as much as formerly, and partly because it seemed to be wise for her to take as few drugs as possible. During last January she slept so little that it became necessary to interfere. I accordingly gave her chloral hydrate. She took sometimes thirty and sometimes forty-five grs. in solution on going to bed. The immediate effect was generally to produce a slight amount of nausea. This lasted rarely more than fifteen minutes, after which she went to sleep, and slept quietly for several hours. For nearly three months, from the last week in January till the first of May, she took chloral more than two-thirds of the time at night. There were a few occasions when the largest dose above mentioned failed to cause sleep, and I did not wish to increase the quantity. These occasions were times of unusual excitement. Excepting these, she always got a sufficiently good night from the drug. Besides the temporary nausea just referred to, it produced no ill effects. There was no headache, indigestion or discomfort during the day. She did not go to sleep so soon after taking chloral as I have usually seen persons do. Sometimes more than an hour elapsed after taking it, before sleep was induced.

Case V. *Paralysis Agitans.*—A man between fifty and sixty years of age, had the first symptoms of paralysis agitans more than ten years ago. The disease has steadily progressed, exhibiting the tremors, paralysis, forward stoop and accelerating walk that are so characteristic of it. During the past year, it has evidently been approaching its final stage. The jactitations have not been entirely suspended by day, at any time lately, and have often aroused him at night. He has suffered from intense pain and weariness, and been unable to feed himself, or read or help himself at all. On lying down at night, the jactitations have been violent enough to shake the whole bed perceptibly. He was often one or two hours shaking in this way on his bed, before he fell asleep. If he awoke during the night, which not unfrequently happened, he had to go through another long process of shaking before sleep calmed him again. He awoke early each morning, and directly upon awaking the tremors began again, to stop only when another night's sleep brought him a little respite from them. Considerable relief was obtained from morphia, after conium, valerianate of zinc, cannabis Indica, &c., had either been tried and failed to do any good, or had ceased to afford relief. The relief which morphia yielded was partial, and it was necessary to increase the doses steadily in order to get much benefit from it. On Feb. 9th I gave him 20 grs. of chloral hydrate, with directions to repeat it if necessary. The effect of the first dose was most fortunate. In about ten minutes after it was swallowed, the jactitation ceased. Presently he fell asleep. In a few hours he awoke and got a second dose, with an equally good result. From that night to this present writing, a period of more than three months, he has taken every night from 40 to 60 grs. of chloral in divided doses, and has usually slept an average of eight hours, peacefully, after the taking of it. Two or three times, he has tried an article of American manufacture, and then has suffered from nausea, directly after swallowing it, and from a disturbed head on the following day. Excepting these occasions, it has produced no apparent ill effects. I cannot see that it has checked the progress of the disease, or done other good than the unspeakable one of giving him rest from jactitation and pain, one-third of each twenty-four hours. His own estimate of the value to himself of the relief thus obtained may be gathered from the fact, that when, not long ago, there happened to be a short supply of foreign chloral in Boston, he bought up all there was in the city, lest he should be deprived of it for a time.

Case VI. *Opium Eating.*—An octogenarian lady took morphia by the advice of her physician thirteen or fourteen years ago. She continued to take it of her own accord afterwards, and has persisted in the habit thus acquired. She now takes about two grains of sulphate of morphia every night. In consequence of an attempt to discontinue its use, awhile ago, she became restless, excited, nervous and sleepless, with symptoms not unlike those of delirium tremens. After two or three days and nights had elapsed without sleep, I gave her 15 grs. of chloral hydrate. This quantity calmed her. A second dose of the same amount was followed by a sleep of several hours. Unfortunately, the habit of taking morphia could not be broken up, and she resumed her customary dose at night. This has quieted and comforted her, but has not always induced sleep. When it has not, 15 grs. of chloral have always been sufficient to put her to sleep in a short time. Less chloral was required to produce sleep when morphia had been previously administered, than when the latter article had not been given. There is a physiological explanation of this fact which has previously been referred to.

Case VII. *Phthisis.*—Mr. E., æt. 28, died of phthisis not long since. The disease ran a rapid course. He was not troubled by a cough any more than most phthisical patients are ; perhaps not so much as the majority are. For the last two months of his life, he required some sort of anodyne every night to enable him to obtain a necessary amount of sleep. For this purpose I gave him 15 grs. of chloral hydrate in solution, with directions to repeat the dose according to circumstances. Sometimes one dose was enough to quiet him sufficiently for the night, and sometimes he took two or three doses before rest was procured. The anodyne action of the drug was so satisfactory, that it was undesirable to try any other. He took chloral nearly every night for the last two months of his life. No unpleasant effects were observed.

Case VIII. *Organic Disease of the Heart.*—Mr. S., æt. about 40, has suffered for many years past from valvular disease of the heart, the sequla of rheumatism. Last April he was attacked with an ulcerated sore throat and otitis of the right ear. The inflammation of the ear terminated in a central perforation of the membrana tympani of that ear. During convalescence from the acute attack of the throat and ear, he complained greatly of tinnitus aurium and a sense of unusual discomfort in his head. These disturbed him so much that his sleep was seriously interfered with. With the hope of relieving him, I gave him 15 grs. of chloral hydrate at night, with directions to repeat the dose in half an hour if necessary. He went to sleep shortly after taking the first dose. On the next morning, he asked me if chloral ever affected the heart. I replied by asking why he put the question. "Because," he answered, "in a minute or thereabouts after swallowing the drug, I felt pain in the region of the heart, together with palpitation. The pain and palpitation soon passed away, and I fell asleep." He did not know that chloral slows the action of the heart, or in any way affects that organ, so that his imagination did not prompt or excite the symptoms. He was moreover a man whose intelligence and temperament were such that he could be trusted to watch his own symptoms. I therefore advised him to repeat the chloral, and to ascertain if possible whether it did or did not act upon the heart as he supposed. He accordingly took it for three nights consecutively, in the dose of 15 grs. each night. Before taking it, he undressed and got into bed. Then laying his hand over his heart, he ascertained that the impulse and turbulence of the organ were not greater than what he was accustomed to. When these facts were determined, he swallowed the chloral. Directly, that is, in one or two minutes, as he reported to me, he felt a change in the character of the heart's action. The heart beat more irregularly—fluttered is the term he used—and with the fluttering came pain in the heart's region. The symptoms might be called anginiform. They continued less than a quarter of an hour, and then passed away. This experiment was repeated three times with the same result. I did not care to continue the experiment beyond this, or to increase the dose.

Case IX. *Insomnia.*—Mrs P., æt. 48, has menstruated irregularly for the past year or two, and has suffered from many of the symptoms incident to her age. Insomnia has perhaps been the most persistent and trying of all of them. I have not given her opium in any form. Indian hemp, hyoscyamus, &c., have not rendered her much service, but she has received great benefit from chloral hydrate. She has taken it in doses varying from fifteen to thirty grains. Sometimes one and sometimes two doses have been requisite to produce sleep. When she has required it, sleep has always followed, and there have been no unpleasant effects subsequently.

ACUPRESSURE AND SIR J. Y. SIMPSON.

Mr. Editor,—Three years ago, while attending the visit of M. Gosselin at *la Pitié*, in Paris, the writer was introduced to Dr. Simpson. He was of medium height, somewhat inclined to corpulency and almost carelessly attired. In both dress and bearing his *confrère* in honors, Sir Wm. Fergusson, would have approached more nearly the ideal of a British baronet. But his kindly manner on greeting me, and the way in which his benevolent features brightened as he inquired after his transatlantic friends in Boston, naming each one, will never be forgotten.

Being accompanied by an English physician, who acted as an interpreter, he sought, during the remainder of the visit, to convince M. Gosselin, and the attentive *internes* and students, of the value of acupressure as a means of arresting hæmorrhage. He said that in the hospitals of Paris—in the very *Hôtel Dieu*—owing to the conservatism of French surgeons, the cautery and caustics were not superseded by the ligature till a century and a half after the introduction of the latter by Paré. This was assented to by M. Gosselin. In support of this new procedure, he cited the case of a child who had undergone a major amputation, and who recovered without hæmorrhage or suppuration, though twelve hours after the operation the house-surgeon found the little patient had drawn out the pins and was playing with them! He said, also, that he had known the pins to be withdrawn *four* hours after the patient had left the operating table, and with no untoward result. As he was to leave Paris on the following day, as enthusiastic as a young man, Dr. Simpson wished to have M. Gosselin try acupressure *then;* but as there were to be no operations on that day, he finally asked to go to the dead-house, where he exemplified his theory by applying acupressure to the brachial artery of a cadaver.

Having persuaded M. Gosselin to attempt its use, he advised all who were present to do the same, and after circulating several copies of his *Notes on the Progress of Acupressure,* bade all adieu, and departed from the walls that for centuries had echoed to the tread of celebrated men, but of none more so than the lately deceased and greatly lamented Professor of Medicine and Midwifery in the University of Edinburgh. D. C.

Hingham, Mass.

Selected Papers.

FUNERAL OF SIR JAMES Y. SIMPSON.

The funeral of Sir James Young Simpson was celebrated on May 13th. A large number of professional and literary bodies, with which the deceased was connected, walked in front of the hearse, this part of the procession being closed by the Senatus Academicus, in their robes. The hearse, which was open, and richly plumed, was followed by the relatives of the deceased on foot, the magistrates and Council of Edinburgh robed, the corporations of Bathgate (the birthplace of the deceased), Leith, and other places. The whole procession numbered upwards of 1700 persons, and 70 carriages followed. A large concourse thronged the streets, and the principal shops were shut during the funeral. The place of interment was Warriston Cemetery. The following was the order of the procession: The police, the public, the Granton Literary Association, the Philosophical Institution, the Chamber of Commerce, the Merchant Company, the solicitors before the supreme courts, the writers to the Signet, the advocates, the Kirk sessions and deacons of Free St. John's Church, the United Presbyterian Synod, the Free Church Presbytery, the Established Presbytery, the Rectors and Masters of the High School, the Principal and Professors of the Veterinary College, the Edinburgh Geological Society, the Botanical Society, the Society of Arts, the Society of Antiquaries, the Royal Scottish Academy, the Royal Society, the Royal Medical Society, the Pharmaceutical Society, the Medico-chirurgical Society, the Obstetrical Society, the students, the College of Surgeons, the College of Physicians, the Senatus and the office-bearers of the University, the hearse, the deceased's carriage, the relatives and friends, Lord Provost, magistrates and town council, the office-bearers of High Constables, the town council of Leith, the town council of Portobello, the town council of Bathgate, the general body of High Constables, the directors of the British Medical Assurance Society, carriages.

Reports of Medical Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.
CHARLES D. HOMANS, M.D., SECRETARY.

March 14th.—*Case of Coccyodynia.*—Dr. Z. B. Adams reported the case.

February 4, 1870. Carrie E., 11 years old last Christmas. Pale, delicate-looking, well grown and rather tall. Two years ago last September she slipped in going down stairs, and fell, striking upon the tip of the coccyx against the edges of several successive stairs. Complained of severe pain and tenderness about the coccyx, which has continued, more or less, up to the present time, with occasional exacerbations, on receiving any jar or shock. At times after slight injury, such as a sudden push, slip or stumble, has been confined to the bed or chair for several weeks, being unable to stand erect or walk without great suffering. Has always pain on going up stairs or rising from a chair. No pain in defæcation. A constant dull aching or soreness is complained of in the part. At the present time the region of the coccyx is so sensitive that she will not allow it to be touched. Is losing flesh and color; bowels irregular, and appetite poor and capricious. It is difficult to dress or undress her, as she cannot bear to be moved to an erect posture. Leeching and counter-irritation, sedatives and narcotics, have been tried without satisfactory results.

I advised Prof. J. Y. Simpson's method of subcutaneous tenotomy. After some hesitation this was consented to.

It was necessary to administer ether, on account of the excessive sensitiveness of the parts. A small puncture was made directly over the tip of the coccyx. Through this a tenotomy knife was entered along the back of the bones, and the muscular attachments divided on each side. Although there had been no complaint of pain in defæcation, the attachment of the levator ani to the tip of the coccyx was also cut, and the knife passed completely round.

On recovering from the ether, it was at once perceived that the excessive sensitiveness of the part had disappeared. As soon as the soreness resulting from the operation began to diminish, it was found that she could stand and walk without the slightest pain. Gradually the feeling of soreness or dull aching also wore away.

It is stated by Simpson, and Dr. Adams believed generally admitted, that coccyodynia is a disorder peculiar to the female sex, or occurring only exceptionally in the male. The explanation of this may be found, perhaps, in the anatomical peculiarity of the female coccyx, in which the bony segments are separated by thin plates of fibro-cartilage, and the whole from the sacrum by an articular synovial sac. In the male these parts are found to be ossified quite early in life. If, then, we suppose the injury to be inflicted upon these little plates of fibro-cartilage, or upon the bursa, it is easy to conceive how the glutæus, when in full action, as in erecting the pelvis upon the fixed thigh, acts to push the segments of the coccyx together and the whole against the sacrum; and accordingly the remedy is found in division of those fibres of the glutei maximi which are attached to the sides of the ossa coccygis.

Dr. Hodges said this operation had been done several times by himself, Dr. J. M. Warren, and others in this city.

March 15th.—*Fragment of Bone lodged in Right Primary Bronchus for three Weeks; Death.*—Dr. Z. B. Adams reported the case and showed the specimen.

J. R., patient of Dr. G. S. Eddy, of Saxonville; Scotchman; 67 years of age; ship carpenter by trade; has lived many years on a farm; health always excellent, and has never employed a physician; short, neither full nor spare habit, very muscular and active; temperate and regular in living.

Three weeks ago, on rising from the breakfast-table, with his mouth full and talking, he suddenly choked. He was eating corn-cake and hash at the time, and wore a set of ill-fitting false teeth. He became suffocated, thrust his finger down his throat and tried to induce vomiting, and began to cough violently. This cough was dry, at first almost incessant. It continued, rather diminishing than increasing, until his death. His breathing also was short, difficult, hoarse and rattling from the beginning, but there was little or no expectoration, nor complaint of pain. Went about as usual a few days after the accident. Did not call a doctor for ten days or more, and then only to be rid of the cough, which was very harassing, especially on lying down. Last Sunday, Feb. 27th, one week before his death, he walked to church (a distance something short of two miles, up and down two steep hills) and back after attending service. Then complained only of shortness of breath in ascending the hills, and was obliged to stop and rest several times on the way home, from this cause. It was remarked that he did not cough at all during the service in church.

March 5th, 4½, P.M.—Seen for the first time, in consultation with Dr. G. S. Eddy. The patient is sitting up, complains of no pain, but of a harassing cough, which began by swallowing some corn-cake "the wrong way," just three weeks ago. Has been feverish and confined to the house only a few days. Countenance pale, haggard and anxious; beads of sweat upon the forehead; respiration labored and rattling; pulse small and rapid; no cough except on lying down; expectoration frothy, muco-purulent. Percussion over right back gave a dull sound, but no positive flatness, except over a space about the size of a dollar. Respiratory murmur indistinct; no bronchial respiration; a sharp sub-mucous rattle or click heard once, and a peculiar resonance of the voice remarked over the spot of greatest dulness. Death occurred on the morning of March 6th.

The *post-mortem* revealed the presence of a bit of mutton bone, about an inch in length and half an inch or more in thickness, irregularly fractured, firmly lodged in the right primary bronchus, about an inch from the bifurcation. The left lung was apparently healthy; the right lung presented abundant tubercular deposit (Dr. J. B. S. Jackson) and general congestion. At the spot of greatest dulness was a depression, reminding the observer of atalektasis. The branches of the right pulmonary artery (two of them at least) were blocked with firm fibrinous casts. Other organs healthy.

March 28th.—*Malignant Tumor in and outside of Larynx; Tracheotomy; Death from Exhaustion.*—Dr. Cheever reported the case and showed the specimen.

The patient had been under the care of many physicians of Boston and New York. He was thirty-seven years old, a shipmaster. The whole duration of the diseaae was six years; at first there was hoarseness and aphonia, but the existence of a tumor on the vocal cords was diagnosticated one year ago, and was treated through the mouth by caustics, &c., by means of the laryngoscope. Tracheotomy was performed by Dr. Sayre, in New York, in August, 1869, on account of a sudden attack of dyspnœa threatening suffocation; and a tube has been worn ever since.

The tumor has been gradually increasing in size, so that for the last three months it has been necessary to lengthen the tube from one quarter to one half an inch every three weeks.

For four months he has been able to swallow liquids alone, and the growth of the tumor has been very rapid; it began to break down four weeks ago; there were considerable hæmorrhages, offensive discharge, sloughs, &c. Death took place from exhaustion.

The tumor filled the larynx, and just above the level of the cricoid cartilage had opened into the pharynx on one side; it surrounds the whole larynx outside, being about as large as a duck's egg, but before sloughing was the size of a goose's egg. The tube entered the trachea just below the cricoid, and passed through the tumor. The tumor did not extend into the trachea.

Dr. H. K. Oliver said that he saw this patient several years ago. He then had general inflammation of the laryngeal mucous membrane, of a mild type, but no neoplasm. About a year ago he saw him again. There was then a growth that had the appearance of being malignant. In reference to the feasibility of the removal of such a growth by laryngotomy, Dr. Oliver said that success would depend upon whether the adjacent tissues had been encroached upon. Other neoplasms besides those of a truly malignant nature had a tendency to return after apparent extirpation. Most of the warty growths were of this class; they differed from malignant growths not in their form alone, but in the fact that they did not spread to the adjacent tissues—the mucous membrane being their *habitat*. These warty forms may disappear spontaneously.

March 28th.—*Diaphragmatic Hernia.*—Dr. Borland reported the case and showed the specimen.

The patient, who entered the City Hospital March 8th, was a man 31 years old, born in Maine, of a strong, healthy family, and had been himself in robust health. Entering the army in the late war, he was wounded at the battle of Gettysburg, by a minie ball, which entered the chest at the tenth rib, about one-third of its length from its vertebral end, probably traversing the chest, making its exit between the 6th and 7th ribs, under the left axilla; then going through the left arm, in front of, but not injuring the left humerus. From the effects of this wound he was in one of the military hospitals for seven months, but recovered sufficiently well to work steadily at his trade, that of a chair maker, until the latter part of February last, two weeks before entrance. He felt in generally good health during this period, with the exception of suffering from dyspnœa on exposure, although he thought he had lost some thirty or forty pounds in weight. Four months ago, however, he began to have some pain at the epigastrium, which was increased by eating, and relieved by vomiting; for the last week before entrance the vomiting was persistent. In the early part of February he "took cold," had general pains and cough, with no chill, swelling of joints, or especial dyspnœa.

At the time of admission he had kept his bed for one week. Face was dusky. Tongue thinly coated; appetite variable. Bowels alternately loose or costive; pulse 120, weak; respirations 28; temperature 98·5° Fahr. No cerebral symptoms; nor was there pulmonary or cardiac distress; there being scarcely any cough. He had, however, a constant gnawing pain at the epigastrium, which did not extend through to the back, and there was some tenderness, on pressure, below the ensiform cartilage. He had intense pain after eating until relieved by vomiting. There had been no blood thrown off, either by the mouth or rectum. He slept but poorly.

The physical examination gave the following results:—The chest was very thin, with the clavicles very prominent, especially the right, which stood up in nearly its entireness, above the surfaces of the supra and infra clavicular spaces.

Percussion, in front, over the entire left chest, resonant; also over right, with the exception of a space between the right nipple and the right edge of the sternum, and the 5th or 7th ribs, and in this place were seen in the intercostal spaces, the pulsations of the heart. Here also were heard the cardiac sounds, rapid, but normal, and in greatest intensity. In the left chest they were heard, but only by transmission, and of a corresponding intensity to what is commonly heard in the right chest.

In the left lower back there was some dulness. The area of hepatic dulness was normal. There were no râles heard in respiration, but a jerky waviness to the respiratory murmur as heard beneath the right clavicle, and in the upper half of the right back. In the left chest there was nothing heard except ordinary respiratory murmur, not particularly marked either loud or deficient, and the heart sounds as before said.

He was treated by milk and lime water hourly in half ounce doses, broths, wines, stimulants, and nutrient enemata, but he steadily and rapidly failed, and died March 12th, having been four days in the hospital.

An autopsy was made by Dr. Webber, March 15th. On opening the body, the left chest was found to be occupied by the lung, by the whole of the stomach and its mesentery, and some of the omentum, and about one and a half pints of grayish-looking fluid, which had come from the stomach. The stomach and other portions foreign to the chest had passed up through an opening in the diaphragm, which was rounded and about 2½ inches in diameter.

The stomach was adherent to the pleural side of the diaphragm, the result of old inflammation. It had, however, recently ruptured, allowing free escape of its contents—being the grayish looking fluid above alluded to—into the pleural cavity. A bridle of old organized lymph, estimated from five to six inches long, passed across and behind the stomach from the lower lobe of the left lung to the outer wall of the diaphragm. The duodenum was dragged over to the left, across, behind the transverse colon.

The heart was entirely on the right side, with the aorta turning normally to the left. The heart was perfectly healthy—not adherent to the pericardium.

The right lung contained air in its upper, middle, and upper part of lower lobes, but the lung was generally flattened against the ribs, and firmly adherent throughout to the costal pleura and pericardial sac. The lower part of the lower lobe was thoroughly compressed and contained no air. There were grayish translucent tubercles scattered throughout both lungs, most, however, on the right lung, and especially at the apex.

The liver was in all respects normal.

The right kidney was a little more adherent to the surrounding tissues than usual; the left had a roughened, nodulated look, after stripping off the capsule; otherwise they appeared healthy.

Most of the glands connected with the small intestine were enlarged and dense. Portions of the intestine were deeply ulcerated, the bottoms of the ulcers being covered with minute white spots (tubercular deposits).

The body of the 7th vertebra had completely degenerated into a mass of cheesy and puriform material, and there was in front of it and on its right side a sac the size of a hen's egg, containing the same material, and communicating with the mass that occupied the place of the vertebra, only the upper and lower tables of the vertebra retaining their osseous character; the cavity of the spinal cord was probably narrowed, but the cord did not seem to be compressed. In this cheesy mass, which occupied the place of the vertebra, no foreign body, such as lead, bits of clothing, &c., could be found, though carefully sought for. No marks of the course of the ball could be found, and nothing showed which direction it took.

Dr. Borland said, "in Dr. Bowditch's monograph, published in 1853, in which he analyzes 88 cases, all that were recorded in medical literature between the years 1610 and 1846, he gives various points of interest, from which I extract the following:—

The hernial opening was observed in the left side of the diaphragm 41 times out of 88. In this case it was in the left.

The general shape of the opening of the diaphragm is rounded or oval. This opening is round in form.

The stomach was found in the left pleural cavity 34 times. The omentum 24 times. The mesentery once. In our case, the foreign bodies were stomach, mesentery and omentum.

The stomach was the most frequently displaced of any organ, being 46 times in 82 cases, and was wholly in the chest in 32 cases. In three cases it was turned up into the chest, the large curvature being bent upwards towards the clavicle, the pyloric and cardiac orifices being nearly level with the diaphragm. This was the condition in our case.

The heart was recorded as thrust to the right 14 times out of the 31 in which it was mentioned.

In 36 cases there was mention of the pulmonary symptoms, and in 27 there was labor in the respiration. Ever after the gunshot wound, this patient had dyspnœa on exposure; he had neither cough, expectoration, or alteration of voice.

Under the general remarks as to the diagnosis, Dr. Bowditch says that there were only two recorded instances of the recognition of diaphragmatic hernia—one by Mr. Lawrence, of London, and one case at the Massachusetts General Hospital.

While the patient was under my charge, the question repeatedly suggested itself to my mind, could the heart be dislocated by a gun-shot wound, or from the effects of such a wound? To this I could give no answer, and certainly I did not think of the real state of things. I have no doubt that the heart dislocation was produced by the hernia; but the question is unsolved, were not the hernia and the diseased vertebra results of the gun-shot wound? I am inclined to believe they were, but can give no positive proof, as other traces of the internal wounds we could not find."

Dr. Fifield said it was stated by Guthrie that wounds of the diaphragm never heal, and are always followed by hernia; he proposed to cut down boldly and relieve the stricture wherever it occurs, but the operation has never been done.

Dr. Bowditch considered any operation of this kind justifiable in view of what is done nowadays in the removal of large tumors, &c., from the abdominal cavity. He thought there may be many cases of this affection resulting from wounds received in the late war. The diagnosis would be aided by experiments in swallowing, &c. In the case which was seen by him in the Massachusetts General Hospital, the man had entered on account of an injury to the back; the heart was found to be dislocated, and borborygmi were heard in the left chest; diaphragmatic hernia was diagnosticated, but at the autopsy it was found to be congenital. The heart had been dislocated a long time.

Dr. Jackson made some remarks upon internal strangulation in general, and said that he had often wished that an operation might be tried in some of these cases. The diagnosis must, of course, be well settled before such a dangerous operation is undertaken; but he thought that in some cases there could be very little question in regard to it. Besides the usual symptoms of strangulation, there is occasionally a sign that he thought had not been sufficiently insisted upon, and that is a more or less distinct tumor in the abdomen. Cases of strangulation, and perhaps many, undoubtedly get well when left to themselves. As in the case of external herniæ, the intestine may get partially strangulated and afterwards withdraw itself. The adhesion, or whatever the cause may be that leads to the strangulation, is a permanent one, and the very circumstance of there having been several similar attacks is one of the diagnostic marks of the affection. Dr. J. referred to a case in illustration, that he had formerly heard related by Dr. James Jackson, and in which there were the symptoms of internal strangulation, and also the tumor. A strict abstinence from cathartic medicines that were being given, as usual in such cases, was enforced; the patient was made as comfortable as possible, and in due time the symptoms subsided, the tumor disappeared, copious evacuations from the bowels followed, and the man was well. Instead of being girt, the intestine not unfrequently lies perfectly loose, so that it can be withdrawn at once, and could be upon the living body; it being remarkable in these cases that the obstruction should seem to be so perfect when there really was none at all. If the abdomen had been opened the adhesion that caused the symptoms would have generally been readily found and easily divided. In other cases, however, a small, hard band of false membrane girts the intestine like a piece of catgut, and so tightly that it is with difficulty seen, and would not be easily divided upon the living body without wounding the intestine.

April 11th.—*Sudden Dyspnœa relieved by Venesection.*—Reported by Dr. Cheever.

Dr. Cheever was called in haste, in the evening, and found a lady of 35 years, with the following history and appearance.

Had been well, except dyspepsia and occasional attacks of palpitation. Twenty minutes before was suddenly seized with intense dyspnœa. At time of visit she was half recumbent on bed, leaning over a wash-basin, and expectorating a bright pink mucus mixed with air. Breathing very distressing and short; face and lips nearly purple; cold perspiration; cool hands and arms; feeble, flickering pulse; intense distress; chest full of coarse bubbling râles, both sides, resonant; no vesicular respiration; heart-sounds masked by noises in the lungs.

Ipecac, grs. 120, in successive doses, and mustard ʒij. in hot water, produced no emesis, nor nausea. Brandy and ammonia were given to sustain the overloaded heart. The whole shoulders, back and loins, were wrapped in an enormous sinapism.

No amendment followed.

The patient grew worse; expectoration ceased; she was, apparently, about to die.

It seemed to Dr. Cheever that the patient was being drowned in her own secretions. From some cause the machinery of respiration had become reversed, and immense *exosmosis* of fluids into the bronchial tubes was taking place, while absorption was paralyzed. The only way to set up *endosmosis*, and turn the tide, was to remove a portion of the contents of the vessels.

One pint of blood (by beer measure) was

taken from a vein in the arm. It was black, and sluggish in running. The first eight ounces produced no effect. Then the pulse began to grow stronger, the breathing easier, and the color better. When the pint had been taken the patient laid down, breathed easily, and the color became florid. She recovered in a few days. *No expectoration occurred after the bleeding.* The lungs cleared by absorption. The heart was subsequently examined and found not remarkable. The pulse became 72, full and regular.

The case seems to bear a resemblance to one reported by Dr. Abbot a year ago; and to recent cases narrated by Drs. Cotting and Fifield.

Dr. Minot said he would mention, in this connection, the case of a young man who was admitted into the Mass. General Hospital on the 5th inst., with great dyspnœa, severe pain in the chest, cough and pneumonic expectoration. He was in the habit of drinking freely, and the attack followed exposure to the wet and cold. His condition was such that it was impossible to make a careful examination of the chest, but there was flatness on percussion, with coarse crepitation over the whole of the right front, and sonorous râles on the other side; the back could not be examined. The sounds of the heart were normal. The chlorides were absent from the urine. The pulse was 116 in the minute, small and thready; respirations, 32. The temperature on the evening of his admission was 103½°. The prognosis was extremely unfavorable. He was ordered a jacket poultice, morphia, beef tea and milk. On the following morning his condition was not improved; temperature, 102°; pulse, 120; distress, as great as before. He was quite delirious in the night. On account of the thread-like character of the pulse, and the extreme dyspnœa, Dr. Minot ordered twelve ounces of blood to be taken from the arm, in the hope that the pulmonary circulation might thereby be relieved. Although no striking change took place immediately after the bleeding, yet the urgent symptoms began to diminish, and in a few hours the patient was entirely relieved. He is now out of danger.

May 9th.—*Myeloid Sarcoma.*—Dr. Hodges exhibited a specimen of myeloid disease of the lower jaw. He remarked that the peculiar characteristic of this disease was the presence, in large numbers, of corpuscles containing many (from ten to thirty and even more) nuclei or nucleolated nuclei, and resembling those found in fœtal marrow. Although these cells had previously been described by Robin, under the name of *myeloplaxes*, as an anatomical element of the medulla of young bones, tumors containing them were first recognized by Paget, and their presence was thought by him to denote a specific form of disease, to which he gave the name of "myeloid." Such tumors are now, however, considered as a variety of the great group of sarcomata. The sarcomata of bone originate either in the periosteum or in the interior and cancellous structure; and, though myeloid cells may occasionally be detected in periosteal sarcomata, or even in growths starting from the soft tissues, as the eye, breast, or testicle, they are only found in numbers sufficiently large to constitute a characteristic element, though never the entire structure, in sarcomata which are developed from the diploe of bones, and rarely, if ever, in those springing from the true medullary cavity. These tumors now bear the name of myeloid sarcoma, or, in the more exact nomenclature of Virchow, of myelogenetic sarcoma (*myelogenes sarkom*).

The present specimen was removed from a patient in the Massachusetts General Hospital, a man 43 years old, otherwise in good health. The growth commenced in the region of the molar teeth, about four months before its removal. It extended from the angle of the lower jaw on one side, nearly to the angle on the other, sprouting from the alveolar border, and forming a tumor of such size as to protrude the chin and lower lip an inch or more beyond the upper. The deformity which it caused was well shown in a photograph of the patient which was presented. The growth was vascular, soft, and lobulated, was rapidly increasing in size, and had begun to invade the cheek. There was no glandular complication. As the development of this peculiar growth seemed sometimes to be stimulated by the condition of the teeth, or their roots, their misplacement, or by their extraction, it was of interest to notice that, since the age of 25, the patient had been toothless. The operation consisted in the removal of all that portion of the jaw which was involved by the disease. It was followed by rapid recovery, with little external deformity. The origin of the tumor from the interior of the bone could be very plainly seen on inspection of the specimen. The microscope revealed large numbers of multinucleated cells. The single cells were of various shapes, being round or oval, and were unseparated by any intercellular substance.

In regard to the probable recurrence of the disease, Dr. Hodges said, that myeloid sarcoma was generally considered as a benign tumor, but such growths were often composite, and even when they were not, showed sometimes a metastatic disposition, and might reappear locally, or in the lungs and elsewhere, after removal.

The prognosis of sarcomatous growths was as much indicated by the position of the tumor and the rapidity of its development, as by the revelations of the microscope. Immunity from a return depended on thorough and early extirpation.

Dr. Jackson exhibited, from the Society's Cabinet, a portion of the pelvis that he believed to have been the seat of this disease. The ramus of the ischium and of the pubes was dilated into an imperfect bony shell, as large as the fœtal head, and in the recent state was filled with a soft substance of moderate consistence, and of a peculiarly mottled reddish and yellowish color. The case occurred many years ago, and there was no microscopic examination. He also referred to two other specimens, which are in the College Museum, and in both of which there were the characteristic microscopic appearances. In one, the head of the tibia was the seat of the disease, which, as in the above case, was remarkably limited, and had formed in the interior of the bone, so as to distend it into a large, thin and very imperfect cyst. In this case, unfortunately, no record was made of the gross appearances. The other College specimen consists of a defined tumor that formed in the soft parts over the ankle, was of the size of a very small orange, and resembled in color the Society's specimen.

April 25th.—*Cretaceous Degeneration of the Crystalline Lens.* Dr. Williams reported the case and showed the specimen.

Miss ——, æt. 18, was hit on the left eye with a stick four years since. Had much pain in the eye for two years, at the end of which time the pain subsided, but vision was lost.

For a year past, as she thinks, the lens has been in the anterior chamber, and has been opaque. The eye has occasionally been red and painful.

She was seen at the City Hospital by Dr. Williams on the 25th of March, 1870. The cornea was somewhat cloudy, and the size and tension of the globe a little diminished. The iris was atrophied and the pupil widely dilated. The lens lay in the anterior chamber, and was evidently hardened and shrunken. Its immediate removal was advised, to obviate danger to the other eye from sympathetic inflammation in case this hard mass should become displaced so as to irritate the ciliary nerves.

After section at the lower part of the cornea an attempt was made to grasp and remove the lens; but this slipped into the posterior chamber and disappeared in the softened vitreous humor, rendering it necessary to search for it with a curette. Upon being removed the lens was found to be completely transformed to a cretaceous condition, and lessened about one-third from its normal size.

Since the operation, notwithstanding the loss of some of the vitreous, the globe has retained nearly its normal size, with a tolerably clear cornea, about as much so as before.

May 9th.—*Death of Sir James Y. Simpson.*

Dr. Parks rose immediately after the reading of the Records, and said that the sad task had been assigned him of announcing to the Society the death three days previously of Sir James Y. Simpson. Dr. Parks gave some reminiscences of a visit to Professor Simpson in 1852, when Professor Retzius of Stockholm was a guest of the distinguished Scottish physician. He spoke of the unbounded hospitality—social and professional—which Dr. Simpson lavished on all medical men from abroad, and described the unwearied toils by night as well as by day, which contributed to the eminence of the name now inscribed on the rolls of departed celebrity. Touching upon the numerous innovations in surgery and medicine which have been suggested by Sir James Simpson's fertile mind, but leaving it to others to assign to them their true place in the science and the art, Dr. P. took satisfaction in reading as follows, from an editorial written by him in the Boston Medical and Surgical Journal, Sept. 16th, 1869, with regard to the agency of the lamented deceased in placing chloroform on the list of anæsthetics :—"We fully acknowledge the enterprise which led Dr. (now Sir) J. Y. Simpson to seek out an agent which should be preferable to ether; and profess for ourselves the opinion that in *military* surgery *chloroform* has an advantage over ether in its greater portability, rapidity of action, and consequently in many cases its availability." Dr. Parks claimed that he was not using merely the language of posthumous eulogy, when he asserted that it was remarkable mental capacity and energy, executive ability and tact, which had raised the Edinburgh physicician, before he had reached middle age, to a cosmopolitan reputation. But the teeming brain strained to its utmost tension, and having perhaps reached the greatest development possible to it here, had now snapped the silver cord, and set free the subtler essence in a higher plane of being, to survey a wider horizon.

On motion of Dr. Bowditch, it was voted that the preceding remarks be entered on the Records of the Society.

RHODE ISLAND MEDICAL SOCIETY.

The Fifty-Ninth Annual Meeting of the Rhode Island Medical Society was held in Providence, Wednesday morning, June 8th, and was attended by a large number of members of the Society from the city and other parts of the State.

The President, Dr. J. W. C. Ely, called the meeting to order at 10 o'clock, and the annual reports of the several standing committees were presented, read, received and ordered to be placed on file. The Board of Censors having held their usual meeting previous to the organization of the annual meeting, Dr. Sylvanus Clapp, Secretary of the Board, read the annual report, which was received and ordered on file. On recommendation of the Board, the following named gentlemen were elected Fellows of the Society:—Dr. Gustavus Radeke, Dr. Charles H. Leonard, Dr. Thomas Maher, Dr. Albert E. Ham, all of Providence. Dr. Alonzo Clarke, of New York, was elected an honorary member. The Treasurer, Dr. T. K. Newhall, presented his annual report, which was read, accepted and ordered on file. Receipts, including cash in treasury at last annual meeting, $402.24. Expenditures, $410.59.

Dr. Otis Bullock, of Warren, delegate from this Society to the Annual Convention of the American Medical Association, held at Washington, D. C., in May, made a report to the Society of the proceedings of that Convention.

Dr. G. L. Collins proposed sundry amendments to the by-laws of the Society, which were read, and on motion, were adopted.

The President, Dr. Ely, appointed the President and Secretary elect a committee to superintend the printing of a new and revised edition of the charter, by-laws and a list of members of the Society.

Dr. S. A. Arnold, Secretary of the Trustees of the Fiske Fund, read the annual report of the Board, which was received and ordered on file. No prize was awarded for an essay received during the past year. The Trustees offer the following prizes for the year 1870:—

First—Ununited Fractures. The conditions under which they occur, and the most successful method of treatment.

Second—Hydrate of Chloral. Its physiological effects and therapeutic uses.

For the best desertation on each or either of these subjects, the Trustees will pay the sum of one hundred dollars. Essays must be sent to the Secretary of the Fiske Fund Trustees, Dr. S. A. Arnold, on or before the first day of May, 1871.

The Society then proceeded to the annual election of its various officers by ballot, as required by the by-laws, and the following named gentlemen were elected for the ensuing year, Dr. Ely having declined a re-election:—

President, Dr. George L. Collins, of Providence—*First Vice-President*, Dr. Lloyd Morton, of Pawtucket—*Second Vice-President*, Dr. Fenner H. Peckham, of Providence—*Recording Secretary*, Dr. Clarence T. Gardner, of Providence—*Corresponding Secretary*, Dr. Charles W. Parsons, of Providence—*Treasurer*, Dr. T. K. Newhall, of Providence—*Board of Censors*, Drs. T. C. Dunn, Newport; Ariel Ballou, Woonsocket; Charles Fabyan, Providence; Otis Bullock, Warren; Sylvanus Clapp, Pawtucket; James Miller, North Providence; J. W. C. Ely, Providence—*Committee on Registration*, Drs. E. M. Snow, E. T. Caswell, Providence; S. Clapp, Pawtucket; James H. Eldridge, East Greenwich; T. C. Dunn, Newport—*Committee on Publication*, Drs. George E. Mason, H. G. Miller, A. R. Becker, Providence—*Audit Committee*, Drs. C. W. Parsons, Charles Fabyan, Providence—*Dinner Committee*, Drs. J. W. C. Ely, T. K. Newhall, Providence.

Dr. C. W. Parsons read a communication from a committee of the American Medical Association, on the subject of an annual medical registration, which was referred to a special committee consisting of Drs. S. Clapp, E. T. Caswell, and George P. Baker.

Dr. George E. Mason, Secretary, read a well written eulogistic obituary essay upon the late Hon. Henry Halsey Childs, M.D., of Pittsfield, Mass., prepared by Dr. S. Clapp, of Pawtucket, which was received, and upon motion, referred to the Committee on Publications. The Secretary also read a petition to Congress, praying that body to establish the rank of the medical officers of the United States Navy, which was signed by many of those present, and will be forwarded to the Senators from this State for presentation in Congress.

Dr. Robert Miller, of Providence, was appointed Orator, and Dr. A. R. Becker, substitute, and Dr. Charles W. Parsons, of Providence, Anniversary Chairman for the next annual meeting.

Drs. S. S. Keene and C. T. Gardner were appointed to prepare papers to present at the next quarterly meeting of the Society, which was appointed to be held in Woonsocket, on the third Wednesday in September.

Dr. Charles O'Leary was appointed orator for the meeting in December.

Dr. Corliss, delegate from the Medical Society of the State of New York, was introduced, and addressed the Society.

The annual dinner was served at the Aldrich House.

Medical and Surgical Journal.

Boston: Thursday, June 16, 1870.

CHARLES DICKENS.

As to the author of matchless demonstrations of mental physiology and pathology in many phases, we claim the right to drop one little flower upon the grave of Dickens. In every profession and every walk of life his aphorisms and the names of his personages have become as "household words." Perhaps no writer of fiction has ever won all hearts as he did for whom the whole world is now thrown into mourning. He was in a certain sense the Robert Burns of prose. "A man's a man for a' that," was the key-note of his teachings.

Manibus date lilia plenis!

THE safe return of Dr. Jacob Bigelow from California is attested by the following lines attributed to him, which we take from the *Advertiser*.

YO-SEMITE:

OR SEEING THE ELEPHANT.

BY A RETURNED TRAVELLER FROM CALIFORNIA.

Ye pilgrims of Yo-Semite
 Whose courage nought can daunt,
Push onward to your destiny
 And see the elephant.

Though gulfs are deep and walls are high,
 And rocks are steep and slant,
You'll never dare go home and say
 You've missed the elephant.

White streaks adown the mountain side
 Disclose the forms you want;
This is the trunk and that the tail
 That make the elephant.

The rain is drizzling fast and thick,
 Be warm or dry you can't—
You wish the gods had gifted you
 With hides of elephant.

'T is getting near the middle night,
 Some ease or rest you want,
Such luxuries are not for those
 Who do the elephant.

Your empty stomachs may suggest
 Some dreams of ducks or brant,
Cheer up! in less than half an hour
 You'll sup on elephant.

Wearied and worn, and galled and sore,
 Your feet on earth you plant,
The lightened horses trot ahead
 To seek the elephant.

On foot behind, with many an oath,
 You sweat and toil and pant,
And when you think you spot the beasts,
 Up looms the elephant.

Some shanties made of leaky boards
 Take in just half who want.
The rest are entertained outside
 Viewing the elephant.

Your head is mazed, your eyes are dim,
 Reflect or feel you can't—
Little care you for scenes and falls,
 Or even for elephant.

Long live King Pullman of the cars—
 And long live General Grant—
Long live the owls and grizzly bears—
 You've seen the elephant!

Boston, June 7, 1870.

WE learn that on the 6th of April, 1870, Dr. Jacob Bigelow, of this city, was elected a Corresponding Member of the Medico-chirurgical Society of Edinburgh. The Medico-chirurgical Society and the Massachusetts Medical Society have now a bond of union in their mutual connection with one whose name is an honor to both associations.

"HARVARD UNIVERSITY.—A Descriptive Catalogue of the Warren Anatomical Museum; by J. B. S. Jackson, M.D., Curator of the Museum, and Shattuck Professor of Morbid Anatomy."

This work, which has cost Dr. Jackson so much labor, has come to us addressed as "from the Medical Faculty of Harvard University." We hardly know how to express our thanks for the invaluable gift.

HISTORIANS DIFFER!

"If we are to accept the Boston claims literally, we must look upon the introduction of chloroform not only as a special injustice to their school, but as an injury to the world at large; whereas we are rather inclined to look upon the discovery of chloroform and its rapid spread of the practice of general anæsthesia as cause and effect."—*London Med. Times and Gazette*, May 28, 1870.

"The position of Sir James Y. Simpson in reference to anæsthetics may be easily stated. He had of course no claim whatever to their introduction, nor is it probable that their general acceptance would have waited for his advocacy of their claims. Indeed, as we have seen, ether had come into a very wide use before chloroform was proposed." — *British Medical Journal*, May 14th, 1870.

More than half the victory is accomplished. The subject is no longer *ignored.*

MAYOR SHURTLEFF'S ADDRESS AT THE RECENT DINNER OF THE MASSACHUSETTS MEDICAL SOCIETY.

MR. CHAIRMAN AND FELLOWS OF THE MEDICAL SOCIETY:—The always very pleasant and instructive occasion—the gathering together of the medical practitioners of Massachusetts—brings us here to-day, at the commencement of another year, to greet each other with the accustomed friendly recognition; and, thankful for the mercies that have been vouchsafed to us, and grateful for the success that has crowned our labors of the past year, to renew our endeavors in the discharge of the varied duties and responsible trusts of our most honorable, benevolent and useful profession. The citizens of Boston are never better pleased than when, on this regular recurring anniversary of the Massachusetts Medical Society, they behold the pleasant countenances and intelligent features of the medical men of the commonwealth gladdening our streets and byways, and diffusing about them a general serenity, resulting from the confidence that all is well, and that the outpouring from Pandora's famous box of all the ills that flesh is heir to, has for a while given way and yielded to the power and skill of your professional knowledge and beneficence. Gentlemen, allow me to join my professional brethren of this city in extending to you a most hearty welcome to Boston; and to you, Mr. Chairman, and to your associates on the committee of arrangements, I feel very grateful for the privilege of expressing, in behalf of my fellow citizens of all professions, occupations and callings, a most cordial greeting on this your annual gathering for business, and the exchange and cultivation of friendly feelings and the social sentiments. Nothing tends so much to strengthen the bonds of professional friendship, and to increase the influence and make known the excellencies of the good physician, as the demonstration which you make this day before the people, by throwing aside the engrossing care of your responsibilities, and joining each other, as you do now, in this reasonable and social intercourse with fraternal enjoyment. Such, I hope, will ever be the case with you in all your future meetings. That poet was surely a good student of human nature, and I know he was a good doctor, too, who said that

> "Care to our coffin adds a nail no doubt,
> And every grin so merry draws one out."

He certainly made life more agreeable, if not longer, by his pleasantries and merry thoughts.

On a former occasion, Mr. Chairman, I availed myself of an opportunity like this to say a few words about the class of men that compose this our Society; and I should now like to express again my sentiments of respect for the brethren who have devoted the best energies of their nature to the disinterested work of the good physician. Educated far beyond those of the other professional callings, the physician, a student and observer by day and by night, a philanthropist by necessity as well as by practice and by habit, quietly and unobtrusively performs his never-ending works of human kindness in dispensing his kind words and his most acceptable services, while soothing pain and relieving suffering. His daily practice and habits of life make him a constant and careful observer, not only of those things that appertain to his peculiar occupation, but of all matters that are presented to his view and knowledge. Well educated in practical as well as theoretical knowledge, conversant with all generalities, mixing unavoidably with all classes of the community in which he lives, with an attentive ear and practised eye, he has opportunities for witnessing and the ability of collecting and utilizing a vast amount of information and an incredible number of useful facts, for the instruction and benefit of his race. It is this that gives power and usefulness to the good physician, that makes him esteemed and respected, and makes his counsel and advice in almost all matters so much sought and so highly regarded. It is such men, Mr. Chairman, I assure you, that our citizens are always glad to welcome here, not only on this, but on all occasions; and I know that I express their sentiments in joining you in your greetings to them to-day.

In regard, Sir, to the learned sentiment which you uttered in calling me up to judgment before my peers, I have very little to say. I will honestly own up to having been concerned somewhat in disturbing some of the old landmarks of the city, in removing some of the old decayed wood and debris that has heretofore prevented a good healthy growth of our old city; and if the scalpel and the saw have been unsparing in the removal of necrosis that impeded progress, and if a salutary stimulus has been given of late to the sluggish condition of our affairs, consequent to the great national disorder that has so severely afflicted us, I hope I may be pardoned for the humble part I have taken in the accomplishment. If, sir, I have found things wrong side up, have I not been right in turning them upside down? Would not you, and all other good practitioners, if called in consultation, have advised to so doing? I think you would.

And now, sir, allow me to congratulate the Society on the prosperity which it so apparently enjoys. May success continue to attend the labors of all its fellows; and may each enjoy years of uninterrupted and unbounded happiness, with the consciousness of having well performed his part in the past, and with the determination also of preserving for all time to come the well-merited title of the good physician.

Dr. B. W. Richardson on Chloroform Deaths. *Mr. Editor*,—In a long lecture (6½ columns) in London *Medical Times and Gazette*, May 28th, received to-day, Dr. B. W. Richardson (an authority I suppose it will be admitted) gives his ideas "On Death from Chloroform," and how to avoid it (the death) if possible. The air must not be moist, but dry or dried—temperature must be right, &c. &c. Then the chloroform must be given slowly, &c. After all, some can't take it safely—percentage of deaths must depend "on the percentage of organically sound or unsound persons who are subjected in a given number of cases to the vapor of chloroform"!!

Comparative safety of ether *not* mentioned, *nor ether itself at all*, except as not being useful when mixed with chloroform. Dr. Richardson says:—

"In conclusion, reviewing the past of chloroform as an anæsthetic from its introduction until now, I see nothing to lead me to assume that any of the deaths which have followed the administration have been due either to absence of skill on the part of administrators, want of special knowledge respecting special apparatus, or absence of special mixtures of chloroform with other fluids. I see nothing, again, in bad quality of specimens of chloroform to account for the fatality which has followed its use. Lastly, I see nothing in operative surgery (except that there seem to have been more deaths from the vapor when it has been used for minor than for major operations), to account for the fatality. All through the chapter one administrator appears to have been as skilful and as thoughtful as another, one quality of chloroform as good as another, one operator as careful as another. I can find no single death from chloroform in which even a pretext of a charge could be raised against these factors in the catastrophe. We must, therefore, look for the cause of death in some inherent fault in chloroform itself, which unfits it for every person indiscriminately; or, putting it the other way, in some inherent fault in the organisms of certain persons who die, which renders then unfitted to meet the physiological changes the chloroform excites when it is introduced into the organism." **

THE Massachusetts House of Representatives lately passed, after a great deal of debate and after many attempts to defeat it, a bill that gives promise of an abatement of the slaughter-house nuisance in Brighton. It gives a charter to a company for the purpose of erecting slaughter houses on land in Brighton which it has the authority to take in the same manner as land is taken for railroads. The land must be in a location to be approved by the State Board of Health. The buildings in all the details of construction must also be approved by the board, and the business of the company must be carried on under regulations established by the same authority. When any person engaged in slaughtering within six miles of Faneuil Hall Market is found by the State Board of Health to be carrying it on in a manner injurious to the public health, he may be directed to carry it on upon the premises of this corporation. In case the company and the butchers do not agree upon the terms the board of health may also fix the price to be paid to the company for the use of its facilities, but it is provided by a very judicious amendment that the butcher shall not be compelled to remove his business without sufficient notice, nor if in the meantime he changes his method of slaughtering so that it shall no longer be injurious to public health.

The butchers of Brighton have been very active in their opposition to this bill, but its inherent merits have prevailed. There is really no reason why they should oppose the incorporation, now that the bill has no monopoly in it. They will be perfectly free to carry on their business on their own premises if they are cleanly in their methods. The gain to public health will be very great if the company is organized and operations are carried on under it.—*Advertiser.*

Who would have thought the State Board of Health would be bringing about their reforms with such promptness as this? With them it seems indeed to be "a word and a blow." Nuisances must be about these times finding out what it is to be *bored of health.* According to the doctrine of appetency Brighton noses ought to diminish in size, among coming generations.

☞ We call attention to the prizes offered by the Rhode Island Medical Society, *vide* page 465.

☞ A FEW extra copies of last week's JOURNAL were struck off, and are for sale at the JOURNAL office.

TO CORRESPONDENTS.—Communications accepted:—Case of Poisoning by Atropia.—Case of Poisoning by Aconite.—The Relation of Hæmoptysis to Pulmonary Tuberculosis.

DIED,—At Plymouth, 10th inst., Dr. Winslow Warren, 75.

Deaths in fifteen Cities and Towns of Massachusetts for the week ending June 11, 1870.

Cities and towns.	Number of deaths in each place.	PREVALENT DISEASES.	
		Consumption	Pneumonia.
Boston . . .	112	15	3
Charlestown	8	1	0
Worcester . .	27	6	3
Lowell	9	1	1
Milford	2	1	0
Chelsea	2	0	0
Cambridge . .	7	2	1
Salem	8	3	1
Lawrence . . .	6	1	2
Lynn	8	3	1
Gloucester . .	5	1	1
Fitchburg . . .	1	1	0
Newburyport	3	0	0
Fall River . .	15	2	1
Haverhill . . .	9	3	1
	222	40	15

Lynn reports one and Worcester two deaths from small-pox. From all the above-named places there are reported nine deaths from scarlet fever, five from croup and four from measles.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending June 11th, 112. Males 55—Females 57.—Abscess, 1—accident, 5—apoplexy, 2—asthma, 1—disease of the bowels, 1—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 6—inflammation of the brain, 2—bronchitis, 6—cancer, 4—cholera infantum, 1—cholera morbus, 1—consumption, 15—convulsions, 5—croup, 5—debility, 7—diarrhœa, 1—diphtheria, 1—dropsy of the brain, 4—scarlet fever, 3—typhoid fever, 2—gangrene, 1—disease of the heart, 5—homicide, 1—disease of the kidneys, 3—congestion of the lungs, 2—inflammation of the lungs, 1—malformation (of the rectum), 1—marasmus, 3—measles, 2—old age, 2—peritonitis, 1—premature birth, 3—puerperal disease, 2—scrofula, 1—disease of the spine, 1—suicide, 1—sunstroke, 1—tumor, 1—unknown, 3—whooping cough, 2.

Under 5 years of age, 50—between 5 and 20 years, 9—between 20 and 40 years, 18—between 40 and 60 years, 22—above 60 years, 13. Born in the United States, 75—Ireland, 25—other places, 12.

THE

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Original Communications.

A REPORT OF SOME EXPERIMENTS ON THE REFLEX CONTRACTION OF BLOODVESSELS.[*]

By James J. Putnam, M.D.

In the *Journal de Physiologie*, t. i. p. 502, are reported some experiments made some years ago by Drs. Brown-Séquard and Tholozan, showing that when one hand is immersed in cold water the temperature of the other hand which remains exposed to the air may be found, by means of an ordinary thermometer, to fall several degrees, the amount varying in their experiments from 1° to 12° (C.), regulated in part of course by the temperature of the surrounding air at the time.[†]

Notwithstanding this marked fall of temperature in the hand, that of the mouth and axilla, in their experiments, either remained changed or rose slightly, showing that the temperature of the body at large is unaffected by the chilling of one hand. Once or twice only the temperature of the mouth fell slightly.

Similar results were obtained from the same experiments made on the lower extremities. At the same time they found a great difference in the susceptibility of different persons and of the same person at different times, and with a few persons there was no fall of temperature which an ordinary thermometer could detect.

A set of experiments, the sequel to those just referred to, has lately been made[‡] by Dr. Brown-Séquard and Dr. J. S. Lombard, in which one arm was irritated by pinching, while the changes of temperature were noted by means of a delicate galvanometer attached to a thermo-electric pile. They found that the temperature of the hand and arm irritated rose slightly, while that of the opposite arm fell, the fall with the latter being greater than the rise with the former. In no case, however, did the fall of temperature produced in this way equal that observed in the cold water experiments; amounting at most to but a small fraction of a degree.

For many reasons there seemed to be no doubt that the fall of temperature observed in all these cases was due to the reflex contraction of bloodvessels on the side opposite to that irritated, and additional evidence for this explanation is afforded by some experiments which I have made upon frogs, examining the vessels in the web of one foot under the microscope, while some irritant was applied to the other foot.

The frog's medulla oblongata was first broken up with a needle, by which operation, as is well known, the power of voluntary motion is destroyed and the brain is prevented from any longer receiving sensitive impressions from the extremities, while the circulation continues unchanged for days and even weeks, respiration taking place through the skin. The animal was then pinned to a piece of cork, and the web stretched over a hole by threads tied to the toes. The contraction of the vessels under the microscope was determined, 1st, by comparing them with a micrometer consisting of two hairs stretched across the field of the eye-piece; 2d, by observing the intensity of their coloration; 3d, by watching the rapidity of the current flowing in the smaller vessels, which is diminished when the arteries contract. The irritants used were principally cold, and dilute ammonia.

Three important obstacles to correct observation were, 1st, that irritation of the foot was generally found to cause reflex contraction of all the voluntary muscles, simulating voluntary struggling, and this will often bring about a complete momentary stasis of the circulation in the web, with, sometimes, great contraction of the arteries there; 2d, that the action of the heart was often increased by the same irritation, and the delicate vessels dilated by the increased force of the blood-current so much that slight contractions may have been overborne; 3d, that occasionally more or less rhythmical contractions were observed, taking place independently of the irritation of the other foot.

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[*] Mr. Editor,—Mr. Putnam's Inaugural Dissertation contains a number of new and interesting experiments concisely related, and will, I think, prove acceptable to all your readers who are engaged in physiological studies. I would therefore recommend it for publication in your columns. Yours very truly,
Boston, May 11, 1870. O. W. Holmes.

[†] The fall was generally most marked when the pain in the hand immersed was the most severe.

[‡] Archives de Physiol., Nov. and Dec., 1869.

Allowing for these obstacles, out of 52 trials on about a dozen frogs, in 15 a marked contraction was seen in the vessels of one foot, which seemed fairly attributable to the irritation of the other. The contraction affected almost, if not quite, exclusively the arteries, and generally followed immediately or very shortly after the irritation. With one frog, however, after the application of ammonia as usual, there was some reflex struggling, and not until this was over, a marked contraction of the arteries in the other foot; the same result followed several repetitions of the application. Sometimes a slowing of the circulation took place which was greater than the observed contraction seemed to warrant, and in these cases I inferred that the slowing was due to the contraction of arteries not seen, for I have found a similar slowing without much contraction to follow irritation of the sciatic nerve on the same side with the observed web. The use of cold as an irritant, which consisted generally in the laying of bits of ice upon the foot, had no noticeable effect except in one instance. In this, the application of a bit of ice at first, in a test tube, and then of cold water merely to one foot, was followed immediately by a remarkable slowing of the circulation, and finally by a complete stasis of the same, in the observed part of the opposite web. After the removal of the cold tube the circulation became gradually re-established, and when completely so another application was made with the same result, only this time the circulation was not entirely stopped, but only made noticeably slower. The same was repeated several times, the slowing each time being less marked, without at any time causing general struggling. The test tube was then accidentally applied to the thigh of the same leg, upon which instead of a slowing of the circulation there followed a marked acceleration, the current being again slowed when the cold was reapplied to the foot as before. This experiment was made twenty-four hours or more after the frog's medulla had been destroyed, at which time the circulation is generally more feeble than at first, and the contractions are more frequently observed. At the end of the experiment the arteries were left a good deal dilated.

As a rule the arteries did not contract equally throughout their length, but only at certain points or over limited spaces.

As a final experiment, in three frogs the nerves of the lower leg at first, and afterwards the sciatic nerves, were exposed and irritated by pinching and twisting. With the first frog so treated an immediate and marked contraction of the observed arteries in the web of the opposite side followed each of several successive irritations, each contraction lasting for about one minute and unattended with general struggling. With the second frog a contraction came on, but not until a few seconds after the irritation had been made, and after the first time it failed to appear at all. With the third no contraction, or slowing of the current was seen.

A second set of experiments made lately, in the same manner as before, gives results which are less satisfactory in point of numbers, and of course throws some doubt upon the accuracy with which the first observations were made.

Cold, in these experiments, as before, failed to cause any contraction even when the ice was kept in contact with the opposite foot for ten or fifteen minutes.*

A very weak, interrupted current of electricity was used successfully as an irritant, both on the foot and on the exposed nerves. Altogether, out of six sets of trials with four frogs in which the skin of the foot was irritated, a marked contraction was seen in two. Of eight sets of trials where the nerves were exposed and irritated, by pinching, by touching with ammonia, and by electricity, well-marked contractions were seen in four. In these latter experiments, each individual application of the irritant was not counted as a distinct trial, as was done to a great extent in the former; but if a marked contraction was observed once or twice in the course of a set of applications the whole set was put down as one successful experiment. At the same time, as so small part of the web was under the microscope at any one time many contractions must have escaped notice.

The most satisfactory results in all respects were obtained when the nerves themselves were exposed and irritated by ammonia and by electricity (i. e. galvanic current). It is important to notice that in every case in which the effect of these irritants upon the action of the heart was noted, this either remained unchanged or was increased, never diminished, in force and frequency.

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* It has been observed by Poiseulle (Milne Edwards's Phys., t. iv. p. 266) that in batracians the course of the general circulation may be slowed by exposing a small part of the body to cold, and he explains the fact by supposing that the whole mass of the blood is thereby cooled, it being known that cold fluids move less rapidly through small tubes than those which are warm.

Uniformity in experiments of this kind is hardly to be expected if we are to judge from the experience of Verschnir,[*] who "has seen arteries remain at one time entirely unaffected by the (direct) application of various stimuli, while at another time the application of the same stimuli would cause the most energetic contractions to take place. Sometimes these differences are found between the two sides of the body of the same animal, and even between different twigs of the same arterial stem."

The quickly varying circulation in the ears of a rabbit may also be made use of to show this nervous association between the two sides of the body. In repeated experiments upon two rabbits, I found that if the bulb of a thermometer were held tightly in a fold of one ear, and then, when the mercury had ceased to rise, the other ear were quickly surrounded with some pieces of ice held loose in the hand or in a bag, the mercury would generally immediately fall[†] through ½° to 4° (F.). After remaining at its new level for from a few seconds to four or five minutes, the mercury would then rise rapidly to the extent of 15° to 25°, the ice being still kept in contact with the opposite ear, and at this time the arteries could be seen and felt to be greatly enlarged. In one experiment the temperature fell more than 10°, and had not risen at the end of ten or fifteen minutes; but in this case the rabbit was small, the room cold, and the ear itself got a little wet and chilled. In one case, a piece of heated wood was substituted for the ice; in this no primary fall was observed, but while the mercury was rising as before its course could be checked momentarily by a sudden re-application of the wood. In some cases, also, where ice was used, no primary fall took place; but, except as stated, the great and generally rapid rise was invariable. The action of the heart was unaffected or diminished while the ice was in contact with the ear.

In Milne Edwards's Physiology, t. iv. p. 204, reference is made to some experiments by Callenfels,[‡] showing that the vessels in one ear of a rabbit may be made to dilate by pinching the other ear, but nothing was said of a primary fall; the original article I have not been able to see. He is further quoted as saying:—"If one cuts the spinal nerve (supplying the ear) in a rabbit, an operation which causes a slight dilatation of the bloodvessels in the ear of the same side, he can afterwards provoke a contraction of these same vessels, not only by galvanizing the peripheral end of the cut nerve, but also by irritating in the same manner its trunk which still remains in connection with the medulla, and which is in no more direct communication with the part where the effect of the irritation is produced. It must be, then, that an irritation has been transmitted to the cerebro-spinal axis, and has there set up a nervous action which is directed towards the vessels of the ear."

As the processes of nutrition are so closely connected with, and so dependent upon, the state of the local circulation, pathological facts belonging to the class of those which follow acquire a fresh interest in view of the physiological facts referred to above. In Circular No. 6,[*] Surgeon-General's Office, are given seven cases of reflex paralysis from traumatic cause, and to them may be added an interesting case reported to me by Dr. J. F. Adams, under whose care it was in Washington. Of these eight cases, five indicate a sympathetic relation between the affected limb and its lateral or longitudinal homologue; in three of these, the leg was hit and the arm of the opposite side was paralyzed;[†] in four cases the leg was hit and the paralysis affected the opposite leg, and in two of these latter the paralysis of tact and the pain were found to have fallen upon a place exactly corresponding to the wounded spot as regards position."[‡]

The symmetrical arrangement of syphilitic eruptions, of psoriasis,[§] and of diseases of the coats of the arteries,[‖] is thought by Paget and Budd to be due to the perfect structural likeness existing between exactly symmetrical portions of tissue, which renders them equally liable to be affected by morbid matters in the blood, or by a deficiency there of matters necessary to nutrition. But there is another class of cases, those of so-called metastasis, in which diseased conditions are conducted apparently through the nervous system, from one organ, as the eye or testis, to its symmetrically disposed fellow. In cases of this class at least, and in those given in Circular No. 6, where there is no especial morbid matter in the blood nor any especial organic derangement of the blood itself, and where the disease does not attack the two symmetrical parts at the same time, as would be the case if the peculiar arrangement were due to structural likeness between these parts, the secondary changes in nutrition may very possibly be due to local disturbances of circulation caused by some influence set up by the primary injury or irritation, and conducted through the spinal cord and vaso-motor nerves to the part secondarily affected.

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[*] Cit. in Milne Edwards's Physiologie, t. iv. p. 206.

[†] The extent of the fall must depend, as in Brown-Séquard's experiments, partly on the temperature of the surrounding air.

[‡] Zeitschrift für rationelle Med., 2d Ser., B. vii. p. 191. 1855.

[*] Cit. Boston Med. and Surg. Journal, April 5th, 1866. Art. by Dr. Wilder, on Symmetry, &c., in Disease.

[†] In the experiments of Drs. Brown-Sequard and Lombard, above referred to, there was found a certain nervous association between the arm and leg of opposite sides.

[‡] See, also, a case reported by M. Charcot in the Jour. de Physiol., t. ii. p. 112, and Dict. des Sciences Med., t. lui. p. 613.

[§] Med.-Chirurg. Transact., vol. xxv. Paget and Budd.

[‖] Recherches, &c., by Bizot. Reviewed in Brit. and For. Rev., vol. vi.

THE LATE MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

By J. L. Sullivan, M.D., Boston.

On reviewing the brief but severe strictures, open and covert, upon the proceedings of the American Medical Association at its recent meeting in Washington contained in several numbers of the Journal, I cannot avoid the conclusion that the exponent of medical ideas in Massachusetts is infected with the prevailing misconception as to the position and action of that body with reference to the unhappy controversy between the Medical Society of the District of Columbia and the "National Medical Society of the District," so called.

The fairness and impartiality uniformly evinced by the editors of the Journal towards those who differ from them in opinion, afford the assurance that statements intended to vindicate the honor of the Association and remove the unjust aspersions that have been showered upon it, will, provided they are made in the proper spirit, meet with a cordial reception from the organ of the medical profession in New England. I feel emboldened, therefore, to offer the following explanatory remarks, with the request that their publication may not be unnecessarily delayed.

I shall begin by affirming several propositions, in which certain fundamental principles regulating the government of representative bodies in general, as well as the American Medical Association, are embraced and, as it were, formularized. I shall afterwards endeavor to apply, with logical precision, these principles to the case in hand, with the expectation of proving the injustice done the Association by the press, both medical and secular, throughout the country.

The American Medical Association, then, is a representative body, composed of delegates annually elected or appointed by medical societies, colleges, or hospitals, affiliated with the Association through the adoption of its Code of Ethics, and therefore entitled to representation therein. Like other representative bodies, the Association is governed by a system of laws or rules, in this instance denominated its Code of Ethics.

Like other representative bodies, it can recognize or receive as members none but duly accredited representatives of organizations entitled to representation therein.

As happens in the case of other representative bodies, the seats of members of the Association are liable to be contested, or the attempt may be made to invalidate the credentials of persons claiming to be members thereof. In either event, *it becomes the duty of the Association to determine, in accordance with its existing laws or regulations, whether persons whose seats are contested or whose credentials are disputed, are or are not entitled to membership therein.* However burdensome or invidious circumstances may render the discharge of this duty, nevertheless it is one which the Association cannot refuse to perform without dishonor to itself and injustice to the parties whose rights are involved.

Now, on applying these simple, indeed almost self-evident propositions to the proceedings of the Association, is it not clear that that body could not refuse to consider the questions at issue between the Medical Society of the District of Columbia, and the so-called "National Medical Society" of that District? That it could not refuse will, I think, be apparent from the following considerations.

The former of the above-mentioned Societies, viz. the Medical Society of the District of Columbia, a numerous and highly respectable organization, deriving its charter from the Congress of the United States, and affiliated from the beginning with the National Association, had formally protested against the admission of delegates from the latter, that is, from the so-called "National Medical Society" of the District, on the ground that whereas the aforesaid Society had been organized in violation of the Code of Ethics of the Association, and that by its subsequent action it had constantly infringed the provisions of the Code, therefore the Society never had been and was not now affiliated with the Association, and consequently not entitled to representation therein.

These charges were of too serious a nature to be dismissed without investigation. The matter was accordingly referred to the Committee on Ethics. The members of the Committee unfortunately disagreeing, a majority and minority report were presented, neither of which shed the necessary light upon the merits of the controversy ; neither of which offered any substantial reasons for the action recommended therein. Thus the Association, as much in the dark as before, was reduced to the alternative of adopting at random one report or the other, or of granting a hearing to both sides. That it ultimately chose the latter was, in my judgment, very much to its credit. A patient and impartial investigation of all the evidence resulted in a verdict *against* the so-called National Medical Society of the District of Columbia, a verdict honorable to the Association because rendered with full knowledge of the facts and in accordance therewith—a verdict, moreover, "to all intents and purposes unanimous." The question thus decided was a question of ethics, pure and simple, into which, despite the assertions to the contrary abounding in partizan newspapers or other publications under the control of fire-eating politicians, considerations of race or color did not and could not intrude.

In conclusion, therefore, I submit that no body of sensible men that could be convened in Christendom would have acted or ought to have acted otherwise than did in this instance the American Medical Association, confronted, as it was, with a question which it could not avoid deciding, and upon which it was bound by every consideration of justice and honor to render a decision in accordance, so to speak, "with the law and the evidence."

Furthermore, I submit that it is in the nature of things impossible that a representative body of whatever description should not, occasionally at least, be called upon to adjudicate questions involving the eligibility to membership of persons claiming to be duly accredited thereto, and that in such cases it becomes the imperative duty of the organization to render a just and impartial decision in accordance with its existing rules or laws and the testimony presented. This is precisely what the American Medical Association did, and for so doing has it not been most unjustly assailed?

Reports of Medical Societies.

CASES REPORTED AT THE MEETING OF THE ESSEX NORTH DISTRICT MED. SOCIETY, MAY 4, 1870.

JOHN CROWELL, M.D., COR. SEC. PRO TEM.

Dr. Perkins, of Newburyport, reported a case of dropsy resulting from disease of the heart. The case was peculiar in not yielding to the usual remedies. Powerful diuretics and alteratives had been administered in vain. Dr. Perkins considered the condition of the case as somewhat remarkable, and asked for suggestions.

Dr. Huse, of Georgetown, spoke of his success with digitalis in such cases. His experience with this drug had been that it did not act as a diuretic when the pulse was above its normal beat. When the pulse was brought from 120 to its normal state, then the digitalis began to exert its diuretic properties.

Dr. Whittemore spoke of the successful use of a decoction of the leaves of this drug over the kidneys in an obstinate case of retention, following scarlet fever.

Dr. Lovejoy reported a case of double placenta, in a single birth. A drawing was exhibited showing the placentæ to be distinct and perfect in all respects. This rare anomaly is not mentioned in the usual textbooks on obstetrics. Dr. Sullivan suggested that it was mentioned by Cazeaux in his great work.

Dr. Lamb spoke of the successful use of the fluid extract of ricinus in cases of deficient secretion of milk.

Dr. Cross, of Newburyport, reported a case of difficult labor with breech presentation. One leg only could be detected by manipulation. After delivery it was found that the other leg was firmly twisted around the neck of the child. Several similar cases were reported.

Dr. Tracy, of Andover, spoke of a case of difficult delivery, in which the frontal bone was indented, presenting a concave surface. An incision was made with a bistoury, and the bone snapped into shape by means of a probe.

Dr. Morris Spofford, of Groveland, reported an interesting case of a man, of intemperate habits, suddenly attacked with violent pain in the bowels, which was temporarily relieved by subcutaneous injection of morphine. The patient was out the next day; but the pain returned in the evening, with febrile symptoms of a typhoid type. Next morning found the bowels tympanitic, and the patient in a dying condition, pulseless and free from pain. Death occurred in about thirty-six hours from the first attack.

As the cause of death was somewhat obscure, a *post-mortem* examination, made six hours after death, revealed the following condition:—

The peritoneum was distended with gas. The liver and spleen were healthy. The stomach contained a small quantity of fluid of no special character. Its walls were tender, so as to give way to the slightest pressure of the fingers. The duodenum was, like the stomach, so tender that it could scarcely be handled without breaking. The small intestines were extensively adherent among themselves, looked ragged and rotten, as indeed they were. They, with the omentum, seemed as though they had been boiled, and done to death at that.

The small intestines contained nothing but a small quantity of fluid like that in the stomach, and the same to the amount of a quart was outside the bowels in the peritoneal cavity.

The ileum was perforated in three or four places, and many patches of ulceration were visible as shown in the specimen. The large intestines were empty, and any farther exploration seemed uncalled for.

Dr. Spofford reported another case of a young lady suffering from a difficulty of the bowels of long standing, under the treatment of a homœopathic practitioner.

The patient was much emaciated, but no disease of the lungs could be detected. She was passing from her bowels, two or three times a day, a small quantity of fluid, of the consistency of oat-meal gruel, with globules of oil floating on the surface. Fæcal discharges once in two or three days, attended with pain over the ileo-cœcal region. The disease was pronounced *mesenteric tuberculosis.* Nutritious and stimulating treatment was adopted. An abscess soon made its appearance over the ileo-cœcal region, discharging pus, followed by a fluid identical with that passed from the bowels. The opening was circular, and half an inch in diameter.

The patient was sinking under the exhaustive discharge, when a similar abscess appeared on the opposite side, going through the same process of suppuration, and discharge of peculiar fluid, as in the other fistula. As cold weather advanced the patient rallied a little, and the openings showed signs of healthy granulations. The pulse had come down to 100, and favorable signs of closing are apparent in the edges of the opening. The symptoms favor a hopeful prognosis.

May 30th.—This patient is now well and fleshy, and rides four or five miles without fatigue. The fistulous openings almost closed.

Bibliographical Notices.

Manual of Hypodermic Medication. By Roberts Bartholow, A.M., M.D., Professor of Materia Medica and Therapeutics in the Medical College of Ohio, &c. &c. Philadelphia: J. B. Lippincott & Co. 1869. Pp. 150.

The hypodermic method of using remedies has become quite general during the last few years, and no one who has employed it would willingly be without his syringe. This little manual is intended to be a guide for administering medicines hypodermically. The second chapter of the first part gives information in regard to the instruments and the solutions to be used, the mode of making the injection, and precautions to be taken. The second part is devoted to special therapeutics, and in it each agent is considered separately. The author recommends the following formula for *morphia:*—

℞. Morphiæ sulphat., gr. xvi.;
Aquæ distill., ℥i. M.
Dissolve and filter.

Fifteen minims represent half a grain; five minims, a sixth of a grain. He says: "In commencing, it (the dose) should not exceed one third of that ordinarily administered internally." The physiological effects of this remedy when thus administered are given, with a record of the temperature, pulse and respiration during six hours.

The following is the author's formula for *atropia:*—

℞. Atropiæ sulphat., gr. ij.;
Aquæ distil., ℥i. M.

Five minims of this solution represents one forty-eighth of a grain. The physiological effects of this agent are described, and the range of pulse, respiration and temperature given. These last are just the reverse of what was found in regard to morphia. Immediately after the administration of morphia, the pulse was lowered from 75 to 54 at the end of four hours; then rose to 80. After the use of atropia it rose from 72 to 105 at the end of two hours; then fell to 65. Under morphia respiration fell from 17 to 12; then rose to 17. Under atropia, the respiration rose from 20 to 28; then fell to 19. Under morphia the temperature fell from 37·6° C. to 36·8°; then rose to 38°, and fell again to 37°. Under atropia it rose from 37·6° C. to 38·2°; then fluctuated between 37·8° and 38°.

The following is the author's formula for the use of morphia and atropia combined:

℞. Morphiæ sulph., gr. xvi.;
Atropiæ sulph., gr. i.;
Aquæ distil., ℥i. M. Filter.

Five minims of this solution represent one sixth of a grain of morphia and one ninety-sixth of a grain of atropia. A better proportion is one fourth of a grain of morphia and one ninety-sixth of atropia, as follows:—Morphia solution, 8 parts; atropia solution, 2 parts.

"Whenever the hypodermic injection of morphia is proper and necessary, atropia should be combined with it, unless contraindicated."

Considerable space is given to strychnia, with its physiological action and therapeutical uses. The following formula is recommended:—

℞. Strychniæ sulphat., gr. ij.;
Aquæ distil., ℥i. M.

Five minims represent one forty-eighth of a grain.

The rest of the book is devoted to short notices of Conia, Woorara, Nicotia, Hydrocyanic Acid, Physostigma, Caffein, Ergotin, Quinia, Mercury, Arsenic, Irritant Injections.

A full index is supplied at the end of the volume. W.

The Cell Doctrine: its History and Present State. For the use of Students in Medicine and Dentistry. Also a Copious Bibliography of the Subject. By JAMES TYSON, M.D. Philadelphia: Lindsay & Blakiston. 1870. Pp. 150.

THIS is a useful *résumé* of the earlier views on cell development and growth, followed by notices of the theories of Schleider and Schwann, Henle, Martin Barry, Prof. John Goodsir, Huxley, J. Hughes Bennett, Todd and Bowman, Virchow, Dujardin, Beale and Robin, and closing with the author's views. He believes the ultimate physical element to be what is commonly called the cell, or elementary part, and that it is composed of matter in two states—one central, the other peripheral. The former is that upon which the origin and existence of the cell depends and has the power of multiplying itself. The latter is formed material, derived from the germinal matter, and is the portion of the cell in which alone function resides. The nucleus is not considered essential to the reproduction of the cell. The bibliography is very copious, covering over thirty pages. W.

A Physician's Problems. By CHARLES ELAM, M.D., M.R.C.P. Boston: Fields, Osgood & Co. 12mo. Pp. 400.

THE questions treated by Dr. Elam under this title, are problems indeed; complex in their conditions, grave in their nature, eternal in their existence. They regard the life, the health, the disease, the death, moral and physical, of the human race; and as such, demand of men, especially of medical men, a wider and a deeper consideration than they are wont to give them. Natural heritage involves the transmission of *all* the parent has to the child. How great, then, are the parent's responsibilities, not only as to their *general* character, pursuits, and bodily or mental habit, but also as to their state at the moment of conception.

If there are such things as moral and criminal epidemics, a new stand must be taken, both by those who find themselves in danger of setting pernicious examples, and those who have it in their power to guard others from their influence.

And finally, if the race ever degenerates by the operation of these two causes, the one of contiguity more or less occult in the *present*, the other by hereditary continuity in the *future* and to all time, we cannot too closely scrutinize the mode of operation and the various effects of all those agencies which men are so prone to employ for the temporary relief, or apparent elevation of their weak humanity. In this connection, Dr. Elam takes ground with those who regard the injurious effect of the moderate use of tobacco as by no means proved, but strongly denounces its abuse; and is full of evidence from all quarters as to the baneful influence of the stronger alcoholic stimulants upon the user, his friends and his descendants; idiocy and mental imperfection of all kinds being traced directly to it.

It was unfortunate for our author that he had not been able to read Darwin's late work upon Variation of Animals and Plants under Domestication, before publishing these essays; but on the other hand, the similarity of both facts and treatment and conclusions, upon many points, is most suggestive when we consider that the one author is a physician in active practice, and approaches the subject from the practical side of his comprehensive profession; while the other is a quiet naturalist, who is now ruminating, as it were, in seclusion, the stores of observation and study which a previously long and active life has enabled him to gather concerning the most abstruse biological problem of the day, the mode of origin of species; and who, whether his peculiar theories prove true or not, will have far advanced both the methods and the means of viewing the ways of God to man. On the other hand, while agreeing with Darwin upon many minor points, our author expresses a very decided lack of conviction of the truth of any "development theory."

On page 38 is an intelligible expansion of Goethe's aphorism, that "it is in her monstrosities that Nature reveals to us her secrets." But in remarking this and other references to anomalous formation, one is struck with the almost entire lack of indication that Dr. Elam has seen such cases himself; or, if he has seen them, taken the pains to record and compare them. He may have had reasons for using only the information derived from others, and been thereby better able to discuss its bearings impartially. But now that he has so clearly and forcibly presented some of the most tremendous problems of the day, and suggested the methods of viewing them, let us hope that he may some time add to the present meagre stock of information by means of which their final solution is to be gained.

At any rate, our professional brethren, whose advantages are greater than those of any other class of men for advancing certain scientific questions, ought to lose no opportunities of collecting and studying the facts of both normal and abnormal development, and of the extent and kind of influence which the parents may exert upon the moral and physical constitutions of their offspring. B. G. W.

Third Annual Report of the Metropolitan Board of Health of the State of New York. 1868.

This volume of 700 pages reflects great credit upon those who prepared it and whose work it records. It represents a degree of force, of intelligence, of science allied with practical sagacity, of skilful adaptation of means to ends, which could hardly be expected anywhere, but which has been developed in the city of New York by the awful accumulation of sanitary evils which has so long existed in that most unclean of cities, and the zeal, knowledge and skill of those who have for three years waged desperate war for reform. We may be mistaken in the belief, but we cannot help thinking that experience gained in the army was necessary to the successful conduct of this contest with the powers of negligence and filth. The man who could so organize a moving tent-hospital of five thousand beds in the Army of the Potomac that every man knew his place, was possessed of the kind of talent to set this great work in motion in the city of New York. Let all honor be given to Dr. Edward B. Dalton for these services. Although he has now retired, through ill health, the spirit which he infused remains behind him.

The present volume tells us what the Board of Health were able to do in the third year of their existence. The magnitude of the work is such that ordinary readers must be repelled from its study and full appreciation. One feels, in looking over the bulky pages crowded with information, like a visitor to the picture of the battle of Gettysburg, anxious to get on still higher ground and out of the bewildering details, that he may survey the whole field and catch the salient points.

Here are mingled the vital statistics of Dr. Harris, the admirable report of Drs. Morris and Stiles on the Texan cattle disease, learned and far-reaching disquisitions on fungous parasites, reports of engineers and of chemists, plans for markets and docks, reports of the extent of the reform in tenement houses sheltering half the population of the city, reports upon water, gas, pavements, slaughter-houses, stables, baths, public urinals, vaccination, and an infinite variety of lesser matters. All are worthy of study, and many are models of scientific and practical work; but their very extent and completeness will deter many readers.

One serious fault in the report is to be remarked—the absence of a complete index to the contents of the volume. An inquirer after an essential fact may search for a long time in the disjointed reports for what he needs, exhausting his patience and rendering him liable to discard the whole book for this one serious omission.

The illustrations by colored plates, diagrams and drawings are all that could be wished, and a credit to American art. D.

Obstetric Operations, including the Treatment of Hæmorrhage. By Rob't Barnes, M.D. Lond., F.R.C.P., Obstetric Physician to, and Lecturer on Midwifery and the Diseases of Women and Children at St. Thomas's Hospital, &c. &c. With Additions by Benjamin F. Dawson, M.D., late Lecturer on Uterine Pathology in the Medical Department of the University of New York, &c. &c. New York: D. Appleton & Co. 1870. 8vo. Pp. 483. 87 Outline Illustrations.

We quote the Editor's Preface:

"To the student and practitioner this work will prove of the greatest value, being as it is, a most perfect text-book on 'Obstetric Operations' by one who has fairly earned the right to assume the position of a teacher.

"Aware that it would have been presumptuous to have attempted any improvement of Dr. Barnes's valuable addition to the science of obstetrics, the editor has therefore simply inserted such notes and additions in the original work as the differences in procedure, and in instruments in this country, rendered necessary or advisable.

"He trusts, therefore, that any apparent shortcomings on his part will be excused, and that the work, as presented the first time to the profession of the United States, will meet with that favor which the name of its author should entitle it to receive."

There is much that is original in thought in this book; much that is worthy the attention of the advanced practitioner. Dr. Barnes is no compiler. Having investigated and judged for himself, he describes clearly and concisely. Of the correctness of this statement the reader may form an opinion from the following passage. Speaking of the source of hæmorrhage in placenta prævia, Dr. Barnes says:—

"Next there came a new theory, based upon a presumed physiological basis. Levret believed that the placenta supplied a portion of the blood in this form of uterine hæmorrhage. Rawlins, of Oxford, says: 'The blood proceeds more from the vessels of the detached portion of the placenta than from the denuded vessels of the uterus.' The late Prof. Hamilton entertained the same opinion. Kinder Wood, Radford, and Simpson, adopted this opinion; but they did not agree in their reasoning from it. Simpson drew from it the practical conclusion that, to stop the hæmorrhage, we should completely detach the placenta. Radford, who had previously adopted this practice, was led to it mainly by the clinical observation that the hæmorrhage had ceased on the spontaneous separation and expulsion of the placenta. Another resource, then, was added to our means of dealing with placenta prævia. We might choose between forced delivery and artificial total detachment of the placenta.

"*How is the total detachment of the placenta accomplished?* The method prescribed is to pass the hand, if necessary, into the vagina, then to pass two fingers through the cervix uteri, and with them to separate the placenta.

"The fatal objection I urged against this proceeding was that it was impracticable. In by far the greater number of cases the placenta extends higher than the meridian of the uterus, often reaching the fundus. The fingers are not long enough to reach even half-way toward the farther margin of the placenta. The diameter of the placenta is nine or ten inches; the fingers will barely reach three inches. In the greater number of cases, therefore, in which the directions prescribed have been followed, the placenta has not been wholly detached, and the result, when successful, cannot be attributed to an operation which was not performed. This is further proved by the history of some of the cases narrated as examples of this practice. The child was born alive. Is it consistent with our knowledge of the conditions upon which the child's life depends, to suppose that the child will survive if the whole placenta be detached, unless the birth follow the detachment immediately? And this condition under the postulates of the hypothesis, is wanting.

"The entire detachment of the placenta has been urged on the ground that it can be executed at a stage when the dilatation of the cervix is insufficient to admit of turning. But, if it cannot be executed without passing the whole hand into the uterus, that is, without forcing the hand through the undilated cervix, in what respect is the operation less severe than that of delivery by turning? Is it not reasonable to conclude that, since the forcible entry has been effected, the seizure and extraction of the child, as well as the detachment of the placenta, had better, to give the child a chance, be completed at the same time?

"If so, the special character of the proceeding vanishes; it is even more severe than turning, which does not require the hand to be passed through the cervix.

"But it is contended that clinical observations prove that hæmorrhage has stopped on the total detachment of the placenta. These observations are partly true, partly fallacious. The true observations are those in which the placenta has been *spontaneously* cast off and expelled before the birth of the child. These cases are not numerous. They do not justify the conclusion drawn, that the *artificial* total detachment of the placenta will be equally followed by arrest of hæmorrhage. There is a fundamental physiological distinction between the two cases. When the placenta is cast off spontaneously, it is because the uterus contracts powerfully. This contraction stops the bleeding. When the placenta is detached artificially, there may be, and probably is, defective uterine contraction. The bleeding will be likely to continue. There is no independent virtue in the mere detachment of the placenta, as *post-mortem* hæmorrhage abundantly proves.

"Here, then, we have true observations erroneously interpreted. The fallacious observations are of the following nature: The physician, seeking to imitate the spontaneous detachment, obeys the precept to pass two fingers into the uterus, and concludes that he has wholly detached the placenta. In this he has, in all probability, deceived himself. The fingers can only detach as far as they will reach, that is, from an area of two or three inches from the os uteri. The operator has unconsciously failed in doing what he tried to do; he has unwittingly done very nearly what he ought to do. The hæmorrhage stops; he sees in his success a proof of the truth of the theory that total detachment of the placenta is the security against hæmorrhage. But he has not detached the placenta, as he imagined; he is simply giving proof of the truth of a very different theory.

"I will now endeavor to give a succinct view of my theory of placenta prævia, and of the principles that should guide us in the treatment of this complication.

* * * * * * *

"The inner surface of the uterus may be divided into three zones or regions, by latitudinal circles. The upper circle may be called the upper polar circle. Above this is the fundus of the uterus. This is the seat of fundal placenta, the most natural position. It is the zone or region of safe attachment. The lower circle is the lower polar circle. It divides the cervical zone or region from the meridional zone. The meridional space comprised between the two circles is the region of lateral placenta. This placenta is not liable to previous detachment. Attachment here may, however, cause obliquity of the uterus, oblique position of the child, lingering labor, and dispose to retention of the placenta and *post-partum* hæmorrhage.

"Below the lower circle is the cervical zone, the region of dangerous placental attachment. All placenta fixed here, whether it consist in a flap encroaching downward from the meridional zone, or whether it be the entire placenta, is liable to previous detachment. The mouth of the womb *must* open to give passage to the child. This opening, which implies retraction or shortening of the cervical zone, is incompatible with the preservation of the adhesion of the placenta within its scope. In every other part of the womb there is an easy relation between the contractile limits of the muscular structure and that of the cohering placenta. Within the cervical region this relation is lost. The diminution in surface of the uterine tissue is in excess.

"The lower polar circle is, then, the physiological line of demarkation between prævial and lateral placenta. It is the boundary line *below* which you have a spontaneous placental detachment and hæmorrhage; *above* which spontaneous placental detachment and hæmorrhage cease.

"When the dilatation of the cervix has reached the stage at which the head can pass, and all that part of the placenta which had been originally adherent within the cervical zone is detached, and if, as is the constant tendency of Nature to effect, the intermitting active uterine contractions arrest the hæmorrhage, a stage is reached when the labor is freed from all prævial placental complication; the lateral portion of placenta retains its connection, supporting the child's life; the labor is, in all respects, a natural labor.

"This is the course which Nature strives to accomplish. I have verified it frequently at the bedside. Many cases are recorded by old and recent authors in which this course was successfully accomplished, although the narrators failed to interpret the phenomena correctly. If observations in point are not more abundant, it is simply because men, acting servilely under the thraldom of the 'unavoidable hæmorrhage' theory, fear to let Nature have a chance of vindicating her powers. The instant resort to the *accouchement forcé* interrupts the physiological process, we can see no more.

Mercier seems to have been so struck with the occasional absence of hæmorrhage, that he wrote an essay under the title, '*Les accouchements où le placenta se trouve oppose sur le cot de la matrice sont-ils constamment accompagnés de l'hémorrhagie.*' He thought the exhalant vessels were in a state of constriction which opposed the passage of blood. Moreau and Simpson thought the previous death of the fœtus, and the consequent diversion of blood from the uterus, explained the absence of hæmorrhage. This, to a certain extent, may be true; but I am in a position to affirm, from repeated observation, two things: first, that hæmorrhage occurs when the child has long been dead; secondly, that there may be no hæmorrhage although it is born alive.

"Cazeaux also says, 'the hæmorrhage which has been generally regarded as inevitable under these circumstances may nevertheless not occur, not even during labor; and the dilatation of the neck may be effected without the escape of a drop of blood.'

"In an appendix to my work on Placenta Prævia, I have related the histories of several cases, some quoted from various authors, and some occurring under my own observation, illustrating this point. Indeed, it was the reflection upon a case of this kind, which I saw in 1845, which led me to the working out of my theory. The cases in this appendix referred to, prove the fallacy of the explanations before offered as to the cause of the cessation or absence of hæmorrhage. They show that it is not accounted for by the death of the child, nor by pressure of the head or other part of the child upon the bleeding surface. They afford strong presumption, at least, that the hæmorrhage ceases when the physiological limit I have described has been reached, tonic or active contraction of the uterus concurring. I am far from affirming that Nature is generally equal to the carrying out of this process. Not seldom she is utterly unequal to the task. It is important to know what are the causes of her break-down; knowing these, we obtain valuable indications in practice."

A Winter in Florida, or Observations on the Soil, Climate, &c. By LEDYARD BILL. Second Edition. New York: Wood & Holbrook, 1869. Pp. 222.

THIS little book contains much that is interesting, and as a guide book would be useful. We have been told by those who visited that State during the past winter, that this book was in the hands of almost everybody, and that in all important points it is correct, though, perhaps, a little too highly colored. It seems to be the record of a traveller's experience during one winter. The routes to Jacksonville are mentioned, and the attractions of the peninsula for the pleasure-seeker, the invalid and the speculator are described. The chapter relating to climate most concerns physicians who have patients to send there. One who had come back from hunting alligators, whose face was deeply bronzed by a life passed almost entirely in the open air, assured us there was no place like Florida for persons with pulmonary diseases. The mean temperature during twenty years at St. Augustine, ranged from 57.03° in January to 80.90° in July. The average number of deaths from consumption, according to the census of 1860, was one in 1447, while in this State it was one in 254. The most favorable time for residence in Florida is from early in November to the first of May, though many persons may be able to remain the whole year. Not only consumptives, but those suffering from nervous prostration and general debility, are said to be greatly benefited. The portion of the book devoted to the pleasure-seeker, would also be useful for the invalid, showing him what are the means of amusement and recreation, without which an invalid's time would pass tediously enough. W.

Medical and Surgical Journal.

BOSTON: THURSDAY, JUNE 23, 1870.

THE PHYSICAL PHENOMENA OF LIFE.

M. DECHAMBRE, in the *Gazette Hebdomadaire*, gives, under the above heading, a review of a work by Prof. Gavarret, entitled *Des Phénomènes Physiques de la Vie*; and of a treatise by M. Liègois on physiology as applied to medicine and surgery. We make two extracts.

M. Gavarret aims at M. Cl. Bernard an ill-concealed reproach of inconsistency. On the same page, says Gavarret, on which Bernard declares that we shall eventually reduce to physico-chemical considerations all the properties manifested by the phenomena appertaining to living beings, he does not hesitate to pronounce life to be a *special force*, directing and commanding all the movements, all the functions, all the acts of organized being. Life, says B., is *a creation*. Assuredly, replies our reviewer of the *Gazette* to Gavarret, there is in the idea of a *special creative* force all that is requisite to constitute an "authentic vitalism." In this sense Cl. Bernard is, if you will, a vitalist; but he is a vitalist to such an extent and in such a way as to save him, on examination of his statements, from the by far too flagrant contradiction of himself attributed to him by M. Gavarret in the passage cited. If we have, says our reviewer, understood the passage together with its context, taken in connection with other writings of the same author, the celebrated physiologist subordinates the development of the living being to an unknown force, the expression of a preëstablished *idea*, which determines the mould of such being, establishes the relative accommodation of its parts, while *forming* and associating them, in view of the special function of each, and of the harmony of all the functions—retains them, in fine, under its government during the whole existence of the being. And it is when the action of this force is disordered or perverted that disease or death comes. But its domain extends no further. In the mould which it has cast, and underneath its constant control, the whole work of the machine is performed by virtue of physico-chemical properties. If M. Bernard identifies the properties called vital with physico-chemical *properties*, it is because, according to him, the first do not emanate from the vital *force*, and have nothing in common with it. The vital are properties of matter on the same footing with its other properties, but of which, as he puts it, the phenomenal expression—as contractility, sensibility—does not lend itself, *at present*, to a physico-chemical interpretation. Thus, according to this doctrine, it is always to the *physico-chemical conditions* of primitive development in the living being that we must trace the *vital* manifestations (*explications*) both in the normal and in the pathological condition. The physiologist and the physician are compelled, therefore, to avail themselves of physico-chemistry. * * * * *

In treating of the question of the "solidarity," "reciprocity," or, as we say in English, the correlation of forces, the reviewer cites certain facts relative to muscular contractility. The light thrown upon the subject by the experimental method in the hands of MM. Beclard, Hirn, and Heidenhain, if it be not so dazzling as that from some other sources, has the advantage, he says, of being easily received by minds unfamiliar with difficult problems of this sort.

The muscles of the arm are in repose, their temperature being determined by internal combustion. They contract to flex the forearm. The internal combustion is augmented, and the temperature is proportionately elevated. But if they contract to raise a weight, the elevation of the temperature is less than in simple flexion. But that elevation, on the contrary, is greater if the same muscles contract to arrest a weight in its descent. What do these variations signify? They indicate that nothing has disappeared; that none of the heat is transformed which is developed by the simple flexion of the arm, without raising a weight, without accomplishing a useful work; that the quantity of *positive* work accomplished in the action of raising a weight is represented by the disappearance of an equivalent amount of muscular heat; and finally that in the *negative* work consisting in arresting a weight in its fall, there accumulates in the muscles a quantity of heat equivalent to the intensity of live force destroyed. The experiment shows that there is a *common measure* between the aggregate of work realized, or the aggregate of work destroyed, and the degree of relative lowering, or the degree of relative elevation of the temperature. * * * * * *

From the point of view of the transformation of forces, says the reviewer, the study of the nervous system is more interesting still than that of muscular contraction.

The action peculiar to the nervous system designated by the name *neurility*—just as the power of contracting resident in the muscles is called *contractility*—shows itself, as every body knows, in two distinct ways: i. e. in transmitting on the one hand motion from the centre to the periphery, or on the other hand in transmitting an impression [sensation] from the periphery to the centre. The two orders of nerve *tubes* charged with these functions, have no other office. They are only agents of transmission. It is the *cellules* of the gray substance which communicate the stimulus to the nerves of motion, whether they produce it directly, or communicate it by reflex action. It is those cellules which receive the impressions conveyed by the nerves of sensation. Apart from the nature and the direction of the transmission, there exists no difference between the two orders of nerves. In other words, the neurility is the same in both. In both that property is subordinated to the anatomical structure without there being any pretext for introducing specific force; in both it is the attribute of the nerve fibre, and is not borrowed from the nervous centre; for the peripheral extremity of a motor nerve which has been cut across, continues for some time excitable. Finally, the most decisive proof of this identity of the neurility in the two orders of nerve fibres has been given by MM. Vulpian and Philipeau, in the beautiful experiment, in which, having cut the lingual nerve (sensitive) and the hypoglossus (motor), and having then united the central extremity of the first to the peripheral extremity of the second, they saw the former produce, under the influence of a stimulus applied above the point of union, contraction of the muscles of the tongue, while that member still continued sentient. * * * Passing over certain points, M. Dechambre comes still closer, he says, to the *physical phenomena of life*, in alluding to the increase in the activity of internal combustion, whether at the centre or at the periphery where nervous action is brought into play. An emotion raises the temperature of the body (Burdach), cerebral activity increases the formation of urea more even than muscular action (Byasson). The temperature of an excited nerve is higher than that of a nerve in repose (Helmholtz, Lombard, Valentin, Schiff, &c.). The experiments of Schiff upon excised portions of a nerve are particularly instructive—the more so that they appear to show a constant relation of intensity between the elevation of the temperature, the degree of stimulus applied, and the excitability of the nerve experimented upon. How then, he continues, in the words of Gavarret—how can we fail to perceive that there are between neurility and muscular contractility on the one hand, and heat on the other hand, relations of the same order? In fact, all these results constitute a remarkable accordance of phenomena. And this is not all. The electro-physiological experiments of Matteuci, and certain facts of physiological histology—such as the contraction of muscular fibres which have been deprived of their nerves—tend to prove that the nervous system does not exert a *direct* but only an indirect action upon the anatomical elements. Matteuci, on sending an electric current through a motor nerve, found that the mechanical work, accomplished by the corresponding muscle during contraction, is equal to 30,000 times the work expended to produce the excitement of the nerve. Here is manifestly the intervention of a force other than that furnished by the Voltaic current; and that force, which Matteuci determines by reducing to unity of heat the work accomplished by the muscular contraction and that given by the solution of the zinc in the Voltaic pile—that force can only come from combustion. The indirect action of the nervous system consists in exciting internal combustion, and in creating, by the heat produced, the force which is to be transformed and utilized for the accomplishment of a function; as, for example, for muscular contraction. By the intervention of nervous action, the physico-chemical operation effected in the woof of the nervous tissue is transformed into this other operation—physico-chemical also—by means of which the nerves intervene by their peripheral extremities, here in the secretions, there in muscular contraction, everywhere in nutritive action.

The nervous system, then, is to be regarded as the grand motive power of the living mechanism; and as furnishing the requisite heat not by causing, but by *bringing into activity* as by a *spark*, and by regulating, internal combustion. And it is from that force [heat] transformed that *all* the histological elements—on the same footing with muscular fibre and the elements of nervous tissue itself—derive the distinct dynamic modalities, the special actions, which appertain to them. * * * In the words of Helmholtz, the body of the animal differs from the steam-engine not by the processes which give rise to the heat and to functional activity, but by the mode of appropriating this force to its specific end. M. Gavarret shows life to be characterized by the double circulation of matter and of force—the matter being furnished by the earth and the air, the force by the sun: force utilized by plants for assimilation of matter; transformed into affinity for oxygen; not destroyed, but, on the contrary, preserved under the form of *potential energy* in matter which has become organized; then transformed anew into heat in the general capillaries of the animal which is nourished by the plant, having now by that means become the source of all the functions of the organism. In the cycle, he adds, which revolves between birth and death, the organized being produces nothing, destroys nothing: matter and force come to it from the earth, the air, the sun; and it restores all to the external world.

Pigmentum Nigrum.—The ingenious plea of our able correspondent, on another page, in behalf of the American Medical Association as to its exclusion of the delegates of the National Medical Society of the District of Columbia, defends the Association on merely technical grounds; and we were not aware that the general practice of the latter very dignified body had been thus rigorous in its scrutiny of the status of medical societies and institutions from which delegates had offered themselves. At the recent meeting of the American Medical Association it was well understood and freely talked of beforehand that the engrossing question was to be that of "color"; and we consider it quite beyond doubt that the real question voted upon by the bulk of the members, when certain delegates from the District of Columbia were excluded, was that of *colored physic.*

From the Report of the Superintendent of the Boston Lunatic Hospital we take the following:—

"The number of patients under care, at this date, is 212—120 men and 92 women. Forty-four men and 31 women have been admitted, and 33 men and 32 women have been discharged, during the year. We now number 212, against 202 last year. The whole number under treatment during the year has been 277, against 266 during the previous year.

"Of the admissions, 56 were committed by court, 11 permitted by the Board of Directors, and 8 were received on legal certificates by the Superintendent. Of the last named, 2 were provided for until the court could complete the proper examination, and the rest were too sick to be transported far, or even to be turned away from our door. They werecared for from motives of ordinary humanity. All but one of them died. In each case the action of the Superintendent met with your instant and hearty approval. The admissions by the Board were all made during the early part of the year. At present it is the rule of the Board to admit none but upon an order of court, cases of great emergency alone excepted, and those left to the discretion of the Superintendent. Seven were transferred from the State hospitals at Worcester and Taunton, having become possessed of a legal right here, through the annexation of Dorchester. Many have been dissuaded from placing their relatives here, because of the crowded state of the house, and because they were able, after some sort, to provide for them elsewhere. They have accordingly taken them to other hospitals at great inconvenience and at an expense they are illy able to bear, or have kept them at home to the great discomfort of their families, and manifest and lasting injury of the patients. Many have done this reluctantly and with a bad grace, feeling that they were unjustly shut out from a participation, sorely needed, in the benefits of a hospital, for whose support they yearly pay their proportion by taxation.

"Of the discharges, 14 were recovered, 5 much improved, 3 improved, 6 not improved, and 37 died. One, of the 6 unimproved, eloped. One, of the 5 much improved, was subject to epilepsy. For years before admission, and for a considerable period after, the fits recurred regularly every month. At these periods, he was always a quarrelsome, violent and dangerous man. Under the persistent use of bromide of potassium, for 17 months previous to his discharge, the fits were entirely suspended, and during the same period he was uniformly and thoroughly good-tempered and social. His removal was much regretted.

Of the deaths, 9 were from general paralysis, 5 from consumption, 4 from pneumonia, 4 from the exhaustion of chronic mania, 3 from old age, 3 from paralysis, 2 from peritonitis, 2 from the exhaustion of acute mania, 2 from epilepsy, and one each from dysentery, ulceration of the bladder and disease of the heart. No suicide, no accident has added to the death list. Three of the four cases of pneumonia were in old and very feeble patients. Both cases of peritonitis occurred in patients just convalescent from long and severe disease, and who succumbed to the fresh enemy without a struggle. Five other deaths were among those referred to before, as having been admitted by the Superintendent, who were brought to our door so sick that it was manifestly impossible to refuse them admission (though they had no other claim upon us), and who died in from two to thirty days after. The number of deaths from organic disease of the brain is noticeably large. What agency the crowded state of the hospital, the impossibility of warming it properly, and of ventilating it at all, have had in causing the large death rate of the year, we do not care to inquire. It is sickening to know that it has not been a feeble one, as you yourselves have seen, on more than one occasion, during your frequent visits here.

"The general health of the hospital has been good. No epidemic has worried us. No contagion has entered our wards. No suicide nor accident has fallen to our lot.

Dr. Walker dwells upon the need of a new hospital structure; and the building contractors want one badly. The question has been already discussed, as everybody knows.

Opium in Diabetes.—According to Dr. Pavy, opium, morphia, and codeine, all possess the property of checking the elimination of sugar by the urine. Codeine is most powerful, commencing with one half-grain dose and going on to ten-grain doses thrice a day. A man, aged fifty, after restricted diet and alkalies, was passing urine of specific gravity 10.38, with 26.64 grains of sugar per ounce. After 30 days of opium there was no sugar, and the specific gravity of the urine was 10.25. On leaving off the opium again, the specific gravity rose to 10.48, and 10.65 grains of sugar were passed in 24 hours. On renewing the opium, the sugar immediately lessened, although he continued to take ordinary food. A woman, aged 68, passed five pints of urine of 10.40 specific gravity, and sugar to the extent of 32.72 grains daily. By the use of opium, with ordinary diet, the urine in three months was of specific gravity 19.16, and quite free from sugar. She continued well for 12 months; then anxiety and over work renewed the disease. Again three months of codeine completely cured her. This is a great discovery of Dr. Pavy's.—*Dublin Medical Press and Circular.*

Lithotomy and Lithotrity.—Mr. Holmes Coote says, "Lithotomy, properly performed, is not nearly so serious an operation as some authors have made it. The last 22 cases performed at St. Bartholomew's Hospital have been, without exception, successful. In unfortunately fatal cases the cause of death is not hæmorrhage, or very rarely so. I cannot recall a case of death from hæmorrhage at St. Bartholomew's Hospital during the whole time that I have been attached to the institution. Neither is extravasation of urine a common cause of death with good operators. But when the kidneys have become diseased, the patient's power of recovery seems wonderfully diminished; and inflammation of the peritoneum is an event which the surgeon justly dreads.—*Ibid.*

Manganese in Blood and Milk.—A memoir just read at the Royal Academy of Sciences of Italy, by Professor Polucci, announces a great discovery. It is the constant presence of manganese in the human blood. In more than 20 analyses of the blood of persons of different sexes, professions, health, and temperament, there was always found a certain proportion of manganese. One of the consequences of this fact is that the metal ought also to be found in milk. Submitted to experiment this deduction is entirely confirmed. In 34 analyses of milk, 23 of which were human, four from the cow, and four from the goat, the presence of manganese was constantly observed.—*Ibid.*

Medical Miscellany.

Dr. Robert Thaxter Edes, of Boston, has been appointed by the Board of Overseers of Harvard University Assistant Professor of Materia Medica in the Medical College.

William S. Bowen, Assistant Surgeon United States Navy, has passed a successful examination before the medical board at Philadelphia, for promotion to the grade of surgeon.

Mr. Nunnely, of Leeds.—The death of this distinguished surgeon and medical jurist is announced as having taken place on June 1. Mr. Nunnelly was in his 62d year.

Meteorological.—A thunderstorm, said to be one of the most remarkable for this latitude, traversed New England three days ago. But—perhaps we shall be told bye and bye that it was not our thunder after all!

Mr. H. Case, House-surgeon to the West Herts Infirmary, Hemel Hempsted, has furnished the following notes:—

D. S., aged 50, farm-laborer, was admitted into the West Herts Infirmary in September last, suffering from chronic laryngitis. He had been attacked twelve months before with hoarseness and difficulty of breathing, and this had continued till a week before the date of admission, when he suddenly became much worse, being, as he said, nearly choked two or three times a day, so he sought relief as an in-patient. From the history it was looked upon as specific, and he was treated with pot. iod., hyd. bichlor., and frequent mercurial inhalations, but without avail. He continued to be seized from time to time with paroxysms threatening suffocation, and several times tracheotomy was about to be performed, but he generally rallied after the attack had lasted about five minutes. He experienced great relief from frequent inhalations of steam and a draught containing liq. opii sed. at night. He went on in much the same way for a month, when one morning he was seized with a violent fit of coughing, and brought up some substance which he luckily kept; this turned out to be a bit of bone the size of a small bean, carious, much worn away, and resembling a portion of a neck of mutton bone, and had evidently been swallowed twelve months before. He left the Infirmary, a week afterwards, quite well.—*London Med. Times and Gazette.*

Test for the Purity of Olive Oil. By Dr. Ramon C. Langlies.—In the numerous experiments we have made to ascertain the purity of olive oil, we have yet found no test giving better indications than that of Hanchecorne. With our experience of this we have adopted a process which will determine, in a positive manner, the presence of seed oils, cotton-seed oil in particular, in any sample of olive oil. The test employed is a mixture of three parts of pure nitric acid, forty degrees, and one part water. The operation is performed in a test tube or vial; three grammes of the oil to be tested are mixed with one gramme of the test liquid, and the mixture is heated on a water-bath. If the oil be pure, the liquid becomes clearer, and takes a yellow color, like that of purified olive oil; but if adulterated, the transparency will be the same, but the color red; with five per cent. adulteration the reddish color is characteristic, and with an adulteration amounting to ten per cent. it is decisive. The process occupies but fifteen or twenty minutes, and the coloration of the oils lasts for several days.—*Journal de Pharm. et de Chimie.*

Spotted Fever in Georgia.—One hundred and fifteen persons died with cerebro-spinal meningitis in Coffee county, Georgia, in the month of March. Malignant epidemics of this disease are prevailing, besides, in parts of Mississippi, Florida, South Carolina, and Pennsylvania.

To Correspondents.—Communications accepted:—Blue Pus.

Pamphlets Received.—Microscopical Anatomy of the Human Liver. By Dr. H. D. Schmidt, of New Orleans, Pp. 60.

Married,—In this city, 17th inst., Henry T. Mansfield, M.D., to Miss Antonia Bucknam.

Died,—In this city, 16th inst., Dr. Henry A. Ward.—At Manhattan, Kansas, 10th inst., Dr. Amory Hunting, formerly of Franklin, Mass., and Providence, R. I.

Deaths in fifteen Cities and Towns of Massachusetts for the week ending June 18, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases.	
		Consumption.	Pneumonia.
Boston . . .	91	14	6
Charlestown	7	2	0
Worcester . .	13	4	0
Lowell	12	2	1
Milford	3	1	0
Cambridge . .	6	0	0
Salem	11	4	1
Lawrence . .	12	5	1
Springfield .	4	1	0
Lynn	10	1	0
Gloucester . .	7	0	1
Fitchburg . . .	3	1	0
Taunton . . .	5	2	0
Newburyport	5	4	0
Fall River . .	11	2	0
	200	43	10

Worcester reports two deaths from smallpox. From all the above-named places there are reported eight deaths from scarlet fever, four from cholera infantum, four from measles, and three from croup.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending June 18th, 91. Males 55—Females 36.—Accident, 2—anæmia, 1—asthma, 1—disease of the bladder, 1—inflammation of the bowels, 2—congestion of the brain, 1—disease of the brain, 5—inflammation of the brain, 2—bronchitis, 2—cancer, 2—cholera infantum, 1—consumption, 14—convulsions, 3—croup, 5—debility, 5—diarrhœa, 2—dropsy, 1—dropsy of the brain, 7—drowned, 1—dysentery, 1—epilepsy, 1—erysipelas, 1—scarlet fever, 4—gangrene, 1—disease of the heart, 4—intemperance, 3—disease of the kidneys, 1—inflammation of the lungs, 6—marasmus, 2—measles, 2—stricture of œsophagus, 1—old age, 3—peritonitis, 1—puerperal disease, 1—tumor, 1—unknown, 4.

Under 5 years of age, 34—between 5 and 20 years, 7—between 20 and 40 years, 23—between 40 and 60 years, 16—above 60 years, 11. Born in the United States, 70—Ireland, 15—other places, 6.

THE

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Original Communications.

CONIUM MACULATUM.*

By Leonard Wheeler, M.D., Lincoln, Ms.

Though hemlock is immemorially familiar as a deadly poison to the people in every part of Europe, the advance in the scientific knowledge of its action has been far from keeping pace with that of other agents of apparently no greater value, certainly of no greater interest. For nearly a century it has been in the hands of physicians as a remedy, and largely used at different times in the treatment of various diseases. Notwithstanding this familiar use it has still received little attention from careful scientific men, especially chemists and physiologists.

Very little was really known as to the chemistry of conium previous to the discovery of its active principle forty years ago, and the knowledge of the physiological action is still in a very backward state. Reference to any modern book of therapeutics or materia medica, will show how unsatisfactory, apart from its toxical effects, is the knowledge in regard to it. Pereira acknowledges this ignorance, and Christison laments it as follows: "If physicians or physiologists would acquire definite information as to the physiological effects of hemlock, in small or medicinal doses, they must begin the inquiry anew. Little importance can be attached to anything already done in this field, as I have no doubt whatever that by far the greater proportion of the preparations hitherto employed, have been of very little energy, and in the doses commonly used, absolutely inert." In "Headland on the Action of Medicines" it is described as a general sedative. Other books give no more valuable information.

On its action as a *poison*, many observations have been made and recorded—long ago, and more recently. Modern experiments on the *toxical* effects of conium on animals are so exhaustive and complete as to leave little to be added.

What is the cause of the uncertainty in regard to the medical use of this drug?

First, the plant is a difficult one to distinguish from others of the same class, and is influenced much in its quality by different conditions of soil, climate, and exposure—the juice of the plant grown in a dry place and sunny exposure during a warm season, being far richer in the active principle than that grown under the opposite circumstances of shade and moisture formerly recommended.

Moreover, it is an old idea, since discountenanced, but a second time pretty effectually proved, that the dried leaves lose, in the most careful drying, much, if not all, of the conia which they possessed when green. Geiger says, decisively, that the dried leaves contain no conia—Pereira, that no reliance can be placed on the dried leaves, however carefully prepared; for they sometimes yield no conia, though they possess the proper hemlock odor and a fine green color.

The importance of this point to our inquiry will be seen by reference to any Pharmacopœia. In that of the United States, we find four preparations of conium. Three of them are derived from the dried leaves.

This subject has been minutely investigated, and careful results obtained by several recent observers.

Dr. John Harley* subjected two carefully selected specimens of the dried leaves to the most approved methods for extraction of conia. In addition to this, he tried the effect on himself and various patients, even tottering convalescents, upon whom the physiological effect of the drug is most easily produced, of doses from six to twenty-six times as large as those laid down in the Dispensatory, without producing any effect beyond that of the large amount of stimulus thus exhibited in the preparations made with alcohol.

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* Mr. Editor,—The following paper was presented to the Medical Faculty of Harvard College as the graduating thesis of its author. It contains a number of valuable and original observations with regard to an article of the materia medica whose physiological action has been little studied, and whose therapeutical value is not generally recognized. I advised Dr. Wheeler to send it to you for insertion in your Journal, and commend it to your readers as worthy of their attention.

Very truly yours, Edw. H. Clarke.

* The old Vegetable Neurotics (Gulstonian Lectures, 1868).

From all his experiments, Dr. Harley came to the conclusion that the dried leaves contain little if any conia.

On the other hand, experiments show that in some cases preparations from the dried plant do contain a quantity of the alkaloid sufficient to render them useful.

Dr. Wm. Manlius Smith, of Manlius, N. Y.,* a careful and excellently qualified experimenter, tested the tinctures made from four specimens, gathered by himself, of the leaves and fruit, green and mature, fresh and dried. The tincture made from the parcels of leaves and seeds, after drying, yielded, much to his surprise, the same amount of active principle as the corresponding tinctures made from the undried specimens.

The conditions on which this variation depends, we do not know how to avoid. If, therefore, we would have any preparation free from all this doubt, these preparations from the dried plant must be discarded.

The extractum conii of the U. S. P. is made from the fresh plant; but in its preparation it is exposed to prolonged heat, which is at one stage raised to the boiling point. At this temperature the active principle is rapidly decomposed. Hence the comment of the Dispensatory, that no one of the extracts is more variable in its qualities than this.

There is no useful preparation of conium in our Pharmacopœia.

The English have a good preparation in the succus conii, which is merely the juice preserved in one third of alcohol. The variations in strength are not so great as to be a very serious objection, depending merely on the quality of the plants used in its manufacture.

The best American preparation of conium, so far as I have been able to discover, is Squibb's Fluid Extract of Conium Seed. It is remarked by all investigators of the subject, and noticed in the common books of materia medica, that the green fruit contains a much larger amount of the active principle than other parts of the plant, being from three to seven times as rich in conia. It suffers, also, little from drying or from keeping several years. The seeds should be collected before maturity—about the latter part of July.

Squibb's preparation is made from such seeds, and is regulated in strength so that ♏ i. equals gr. i. of the same specimen of fruit dried; that is, the number of minims of fluid extract made from a quantity of powdered green seeds, is made to equal the number of grains which this quantity would weigh if dry. So that here, as with the succus of the British Pharmacopœia, the only chance of variability in strength, is in the quality of the vegetable itself, and by sufficient care in its selection this cause of deterioration is reduced to a minimum.*

This preparation I have taken in various doses a sufficient number of times to test its power in my own case.

In addition to this, we have the alkaloid conia. It is made by several manufacturers, but is quite rare here. I presume a standard quality is not obtainable.

The specimen which I have is made by Merck, of London. It is not a colorless liquid, as the pure alkaloid is described, but perfectly clear, and of a bright reddish brown color. It has a strong, impregnating, disagreeable odor, much like the urine of mice, is strongly alkaline, and exceedingly irritating. The taste is pungent and astringent.

Physiological Action.—The physiological action of conium is confined mainly, if not entirely, to the motor centres of the body.

On Animals.—I experimented with non-fatal doses of the alkaloid on the frog and rabbit. About ♏ $\frac{1}{5}$ was injected under the skin of the back of a medium sized frog, and the whole surface kept moist in order that the cutaneous respiration might be as perfect as possible. He was very active, as if in pain, for a few minutes. In eight minutes he began to be affected by the dose, drooping and keeping very quiet. In ten minutes he would lie on his back and allow his legs to remain in any position in which they were placed; lids drooping, respiration irregular and slow. At 14 minutes he was completely paralyzed, and, fearing that he was about to die, I exposed the heart, which was beating with fair strength, and continued as follows:

At 15	minutes,	pulse	48
" 20	"	"	"
" 35	"	"	44
" 40	"	"	40
" 50	"	"	39
" 72	"	"	27

During all this time the animal was to all appearance dead, except for a few slight convulsive jerks during the first few minutes, and for the action of the heart. Reflex action was not interfered with. Nothing could be determined as to sensation, the animal being unable to give evidence of pain. Having to leave the experiment after an hour and 12 minutes, I wrapped the frog in a wet cloth, and left it to die, as I supposed. On my return in three hours, he had escaped and was hopping about as well as ever. The effect of double this dose was much the same.

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* Am. Jour. Pharm., 1868, p. 159.

* This extract is made by repercolation, no heat being used in its manufacture.

In two cases I watched the circulation in the web of the frog's foot with similar results, as follows: The dose—about ♏ ss.—was injected, as in the previous case. First effect was in seven minutes, and in twenty minutes he was to all observation completely dead, except for the beating of the heart. The current in the capillaries of the web gradually slowed after a minute or two, and at seven minutes from the time the dose was taken, was stopped completely. It started again slowly in forty minutes, and from that time increased in rapidity till it became again normal. On the calibre of the vessels there was no effect. The pulse was as follows:

At 20 minutes	49 per minute
" 30 "	36 "
" 50 "	27 "
" 68 "	29 "

One very small drop (♏ $\frac{1}{5}$) was put into the eye of a rabbit. The poor creature screamed with pain and rubbed the eye; but was soon overwhelmed by rapidly increasing paralysis, commencing at the end of the second minute, and at twenty minutes so complete that the lids drooped so as nearly to close the eye; the limbs remained where they were placed, and the head fell to one side. Still, he was able, when urged, to draw himself feebly along. At eighty-five minutes he was able to raise himself on his hind legs, and was fast improving, particularly after his nose was thrust out of the window, though he seemed much inclined to sleep, or at least, to remain quiet with the eyes closed. He had apparently recovered in two hours. The pulse and respiration, so far as obtained, were as follows:

	Resp.	Pulse.
At 12 minutes	360	
" 20 "	232	
" 28 "	164	
" 45 "	140	260
" 75 "	140	300

(I was not able to get the healthy pulse and respiration, uninfluenced by struggling or fright.)

On Man.—I experienced the following effects from a dose of Squibb's Fluid Extract of the Seeds. At 11.35 I took ʒi.; felt the first effect in about three-quarters of an hour, viz., a dull feeling of weight across the brows, so that I found myself continually pressing it with my hand—not painful at all, but feeling wrong; with it there was a very little vertigo on quick motion of the eyes or head. Soon after there was a general feeling of weariness, making me glad to lie down, which I did for a few minutes, feeling quite tranquil and comfortable as if resting after long muscular exertion, but not at all dreamy or sleepy. I got up and went to walk, feeling distinctly, as soon as I began to move, the oppressive dulness in the head and weakness of all the muscles; noticed in the arms when I put on my hat, and in the legs all the time; making a flight of stairs a most discouraging obstacle.

These effects were at their height in about three-quarters of an hour, continued for half an hour, and then began to decline. At two o'clock I ate dinner with an excellent appetite, and felt almost no effect afterwards.

From ♏ 30 and downwards I felt no effect at all.

The effect from two drops of conia from the point of a fine pipette (about $\frac{1}{3}$ of a ♏) was much the same in character, though less in degree.

From double this dose (♏ $\frac{2}{3}$), the effect was greater than from ʒi. of the fluid extract. I took the dose at 12.10 o'clock. It produced a burning, astringent sensation in the throat, and afterwards a burning feeling (very slight) in the stomach. The conia was merely diluted with a large amount of water, or rather floated on its surface; if dissolved in alcohol and diluted there would probably be no difficulty in taking it.

As I sat reading, I felt the first effect in twenty minutes. In twenty-five minutes there was fast increasing heaviness of the eyelids. While the eyelids were shut, or while I kept steadily on reading, there was no giddiness or modification of intelligence. I could understand and weigh what I was reading as well as ever I could. But still it was only by considerable exertion that I could do this, because of the difficulty in keeping my eyes well opened and focused; the lids would fall together, and the lines seemed to get out of range, and I had again and again to devote my attention to fixing them—which I could do perfectly well when I tried. There was no inclination to sleep farther than that my muscles felt weary, and my eyes were inclined to close.

In half an hour came the first feeling of muscular weakness, and desire for quiet, which was calm and delicious when indulged, like rest after a day's work. In forty-five minutes I started to walk, having the same dull oppression in the head, and feeling very weak. My gate was swaying and unsteady, and considerable determination was required to complete a half-mile walk without stopping to rest. On sitting down at the end of my journey, I dropped hard into the seat, though exercising the usual amount of caution. In an hour and a half the effect began to decline. At 2 o'clock I ate heartily and perceived no further action of the drug.

In all my experiments I have felt some coldness during the action of conium. In none have I noticed any effect on sensation, the pulse, or the intelligence. Neither have I perceived any hypnotic effect, except so far as muscular quietude, and the dropping together of one's eyelids tempt sleep.

The periods of absorption and elimination can be determined only by the presence of the symptoms of its action, which begin, when the drug is introduced in liquid form by the stomach, in half or three-quarters of an hour, and last from two to four hours. Conia cannot be discovered in any of the excretions.

The rapidity of the symptoms is astonishing. The patient is in a moment stricken with palsy, but in two or three hours there will remain no trace of this powerful influence.

The physiological action is then very limited, "and consists essentially of swift-spreading palsy of the muscles, affecting first those of voluntary motion, then the respiratory muscles of the chest and abdomen."* The primary seat of action is probably the spinal cord. Its effect is the counterpart of that of strychnia in that conium exhausts the nervous energy and leaves the muscles powerless, while strychina irritates it, producing long and powerful contractions of the muscles. This, of course, suggests its employment in poisoning by strychina, but there is no reason for hoping for any antidotal effect from it. It has been tried on animals poisoned with strychnia, with the effect of stopping the convulsions, but not much, if at all, delaying death. Its action in this case is perhaps similar to that of ether, which both delays and alleviates the convulsions, but only slightly defers death.

The first symptoms that I have noticed, is the peculiar feeling of weight across the brows, soon associated with drooping of the lids, and difficulty in the adaptation of the eye; that is, partial paralysis of the third nerve. With larger doses other effects are noticed, from paralysis of other muscles supplied by this nerve, such as double vision and dilatation of the pupil. A little later weakness of the muscles of the legs is noticed, and in rapid succession all the voluntary muscles are involved.

Reflex action is not at all affected by medicinal doses and muscular contractility remains normal. Conium has no direct hypnotic effect, nor does it have any action in the sensory nerves. As to its effect on the sympathetic system, I am not satisfied. I have not been able to make out any effect on my own pulse, and Harley (op. cit.) says: "Except a transient emotional effect on nervous individuals, upon a sudden access of the symptoms after a first dose of hemlock, the heart and bloodvessels are absolutely unaffected by its operation." But there was certainly a marked effect on the pulse of the animals mentioned above, both in the frequency of the beat and the force, as shown by the stopping of the current in the capillaries of the frog's web, without any contraction of the vessels. That complete stasis should occur in both cases after the same interval, and be so prolonged without any contraction of the arteries, must be explained by the presence of some abnormal action.

The final action of conium is upon the involuntary muscles of respiration through which death results by asphyxia. Life is indefinitely prolonged if efficient respiration can by any means be kept up. Thus artificial respiration is the main resource in case of an overdose.

(For a corroboration of these views of its physiological action, and probably for much that is new on the subject, I must refer to a recent long essay on the "Experimental Study of the Physiological Effects of Conicine" (?) by M. Casaubon, a very short notice of which only I have been able to see.)

Dose. — The activity of Hemlock, as might be imagined from its physiological action, is not so much proportionate to the age or robustness of the individual, but depends more on the muscular activity, so that a slight restless child might be unaffected by a dose that would paralyze a strong man of sedentary or indolent habits.

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* Christison Ed. Roy. Soc. Trans. vol. xiii.

And with the same individual at different times, a quantity which, after a long period of repose would be a full dose, might prove insignificant after a season of muscular activity. If a child while taking it recovers rapidly the ability to run about, a largely increasing dose will be found necessary.

The dose of the British succus is ʒ i. (sometimes less) to commence with, and goes up to ʒ vi. or ℥ i.

The dose of Squibb's Fluid Extract I can judge of through my own experience only. From ʒss. I got no effect; the result of a ʒ i. I have recorded. I undoubtedly require more than an average dose. For a child of two years, if moderately active, ʒss. might be a full dose. I should prefer to commence with ♏ x. or ♏ xv. and increase.

It is said that conia is unsuitable for internal use; but properly administered, I see no reason why it may not be employed. It is locally very irritating. The rabbit's eye into which I introduced it was very much inflamed, the lids were closed, and it discharged purulent matter for days; but at the end of a month I was unable to select that rabbit from his companions. As it is so irritating and is soluble only in alcohol and ether, we cannot use it hypodermically. But dissolved in alcohol and diluted with water, it can be taken by the stomach in commencing doses of ♏ $\frac{1}{12}$; or two drops may be dissolved in twenty-four drops of alcohol, and three drops of the solution given on sugar.

I have recorded the effect of ♏ $\frac{2}{3}$ on myself. There was a noticeable effect from half this quantity.

These three preparations — the British Succus, Squibb's Fluid Extract of the seed, (any other worthy manufacturer may of course be substituted), and the alkaloid Conia are the only ones fit for use.

Therapeutic Uses.—For small doses, that is, for doses short of those that produce some of the visible physiological effects, like tonic doses of quinine, we know of no use. *In order to apply hemlock to any remedial use, it is necessary to exhibit full doses, such as will produce unmistakably its paralytic effects.*

The study of the physiological action of conium discovers only one direction in which to employ the drug in the treatment of disease, namely, in convulsive muscular action resulting from irritation, direct or reflex, of the motor centres, in such diseases as the following. First and most important, convulsions or tendency to convulsions in children, occurring so often at the time of dentition, chorea, convulsive action of particular muscle which sometimes occurs, paralysis agitans, epilepsy, tetanus.

"Hemlock is essentially a children's medicine. It has often appeared to me that in the early development of the body, motor activity, from a variety of exciting causes, is liable to a disproportionate development, and that thus a tendency to convulsive diseases often arises." (Harley, op. cit.)

As has been previously said, the modern experimental employment of hemlock has not yet been extensive and careful enough to establish and limit its field of usefulness; but still this can be accomplished with comparative ease when its theoretical use is attended with success. A careful study of physiological action may well take the place of statistics of empirical use. The not yet extensive use of conium, founded on the knowledge of its action, is, to a very encouraging degree, successful.

This general statement I shall allow to take the place of reports of cases which might be adduced in confirmation.

I have aimed in this paper, first, to show that all our officinal preparations of conium are, for various reasons, either totally inert, or so variable as to be practically useless.

Second, to indicate preparations of the drug suitable for use.

Third, to insist on efficient paralyzing doses, the amount of which will depend on the muscular activity of the individual.

Fourth, to explain the time, and mode of action.

Fifth, to indicate merely its therapeutical use.

DIFFERENTIAL INDICATIONS FOR THE USE OF LOCALIZED AND GENERAL ELECTRIZATION.

By A. D. Rockwell, M.D., and Geo. M. Beard, M.D., of New York.

In order to determine the differential indications for the use of localized and general electrization, we need to consider these four facts:—

First, That general electrization *directly* affects the whole body, while localized *directly* affects only the part to which the application is made.

Secondly, That general electrization may, by sympathetic or reflex action, *indirectly* have a special therapeutic influence on some special part or organ, while localized electrization of any part, but especially of the sympathetic nerve or cerebro-spinal axis, may by sympathetic or reflex action *indirectly* influence the whole body.

Thirdly, Electrization, when properly performed, is never injurious, and usually more or less benefits those parts which are in comparative health.

This consideration has an important practical bearing, especially in the use of general electrization, in cases of doubt as to the seat of the disease.

Fourthly, In nearly all cases it is important—in many it is indispensable—that the application should be made to the seat of the disease as well as to the locality of the symptoms. Scientific electro-therapeutics, therefore, requires the most accurate preliminary diagnosis.

Above all, it is important to rigidly discriminate between diseases which are of a constitutional and those which are of a local (that is, central peripheric or reflex) origin.

From these fundamental considerations we logically derive the general law *that constitutional diseases are better treated by general, and local diseases by localizid electrization.* More specifically, experience demonstrates that in a large variety of diseases where applications of electricity are found useful, localized electrization is specially and exclusively indicated.

1st. In those cases where both the seat and effects of the disease are restricted to certain portions of the organism, with but slight yet imperceptible influence on the system at large. Under this head are included nearly all peripheral and many central and reflex paralyses and neuralgiàs, effusions, sprains and other local injuries, and also many of the diseases of the eye, ear, larynx, and genital and digestive organs.

2d. Localized electrization is indicated, though not always exclusively, in those morbid conditions for which galvanization of the cervical sympathetic has been found to be of service. Of the diseases which come under this category, those which yield more surely to galvanization of the sympathetic than to any other method of electrization are paralysis of the sympathetic, muscular atrophy, arthritis nodosa, certain forms of cerebral hyperæmia and disorders of the vaso-motor nerves. Localized electrization in both central and peripheral applications may frequently be alternated with general electrization in very many of the diseases for which the latter method is chiefly indicated. In nervous dyspepsia, chlorosis, hypochondriasis, constitutional paralysis and neuralgia, rheumatism, chorea and functional diseases of special organs, it is sometimes of advantage to use galvanization of the brain, the spine, the sympathetic and the pneumogastric nerves, and peripheral galvanization or faradization a certain portion of the time—although this method alone is far less satisfactory in these diseases than general electrization.

A prominent illustration is found in those paralytic conditions, attended with great diminution or entire loss of electro-muscular contractility, where localized applications are more efficacious to produce muscular contractions than general, although they do little or nothing toward removing the morbid constitutional condition of which the paralysis is but a symptom.

On the other hand, general electrization is indicated—

1st. In those diseases that are dependent on or associated with impairment of nutrition and general debility of the vital functions—such as nervous dyspepsia, neurasthenia, anæmia, hysteria, hypochondriasis, paralysis and neuralgia of a constitutional origin, and frequently in functional disorders of the genital, digestive and other special organs.

2d. In morbid symptoms, dependent on some local cause which cannot be satisfactorily diagnosticated.

It must be confessed that a large number of cases of chronic disease are frequently dependent on, or connected with some important lesion, of which, during the life of the patient, even the most approved methods of diagnosis and the most practised skill utterly fail to ascertain either the nature or the locality. This is oftentimes the case with neuralgia, with paralysis, epilepsy, hysteria and hypochondriasis; sometimes, also, with affections of special organs, as the eye, ear, larynx and uterus.

Benidikt emphatically affirms that electricity should be applied almost exclusively in "*loco morbi*" (in the place of the disease), and in these cases of doubt recommends tentative applications—successively in all the suspected localities—until the diagnosis is made out by the success of the treatment.* It need scarcely be said that this purely experimental system, though sometimes successful, must be and is annoying, uncertain and very frequently unsatisfactory. The advantages of general electrization in such cases of doubtful pathology are two-fold—*first*, at each application it affects all parts of the body, and thus is sure to reach the seat of the disease, wherever that may be; and, *secondly*, it at the same time improves the general nutrition of the system, which in such cases may be more or less impaired. This improvement in nutrition, as has been stated, oftentimes reacts favorably on the local disease. Still further, it must be confessed that very many of the diseases in which general electrization is proved to be of most efficient service, are those in which no special "*locus morbi*" can be found, even on *post-mortem* examination. Future investigations will undoubtedly do much to dispel our ignorance on these points and will probably assign a definite local cause to some of the diseases which are now vaguely classed as constitutional. But even those diseases in which the local cause is definitely ascertained may demand constitutional treatment as much or more than those in which no local cause is demonstrated.

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* Die Elektrotherapie, Vien., 1868.

When a house is set on fire by a burning fuse, it is not enough to snatch away the fuse, we must extinguish the flames; when the nervous system has been thrown into tetanus by a wound in the foot, excision or healing of the wound is of little avail—our remedies must be directed to the central nervous system. Precisely so when chronic local disease has enfeebled the vital functions and impaired nutrition, our applications are to be directed to the general system as well as to the seat of the lesion.

3d. In certain diseases which, though themselves incurable, are accompanied by impairment of nutrition, that is susceptible of more or less relief. Palsy agitans, many cases of cerebral and spinal paralysis, advanced stages of locomotor ataxy, rheumatic gout, epilepsy and certain spastic affections may be absolutely incurable, and yet the emaciation, nervousness, insomnia and general feebleness with which these diseases are associated as causes or effects, or concomitants, may be susceptible of most grateful relief from general electrization.

A disadvantage of general electrization is that it takes more time and labor than local applications. This objection, however, is more than counterbalanced by the superiority and greater rapidity of the results in the condition above named it frequently enables us to achieve. A disadvantage of localized electrization (with the faradaic current) is that it is usually more painful than general electrization, for the reason that the smaller size and nearness of the electrodes to each other cause greater density of the current at its points of entrance and exit. This disadvantage is not ordinarily of sufficient weight to contra-indicate its employment in any case where it may possibly be of service. The comparison we have here made reveals the cause of some of the failures and discouragements that have been and are now being encountered by many experimenters in the department of electro-therapeutics. Constitutional diseases have been treated locally. Morbid constitutional conditions, such as hysteria, anæmia, rheumatism and the like, which demand remedies that affect the system generally, are treated electrically only through their local symptoms, such as peripheral paralysis, or neuralgia, or inflammation of the joint. Temporary relief, or metastasis of these local symptoms, may indeed result from exclusively localized applications in such cases; but permanent correction of the morbid condition on which these symptoms depend can only be obtained by general treatment. In sub-acute rheumatism, for example, galvanization or faradization of an inflamed joint frequently removes the pain and effusion in the joint, and therefore may advantageously be used with general electrization, just as external applications of alkaline solutions may advantageously be combined with the internal administration of the same remedy. In general practice, it will unfortunately be found that physicians will frequently use localized, even in cases for which general electrization is indispensable for complete results, for the reason that they have neither the time nor the practice to enable them to use the latter method with success; just as the majority of general practitioners, for want of a galvanic apparatus, are obliged to use faradization in cases for which galvanization is imperatively demanded.

This comparison, furthermore, reveals and explains the suggestive fact that the sphere of modern electro-therapeutics has in a measure corresponded to and progressed with the advance in the method of application. Thus, when peripheral applications were chiefly used, the scope of electro-therapeutics, though important, was narrow, neuralgia and paralysis being the diseases for which it was mainly employed.

On the introduction of central galvanization, electricity was found to be most useful for many conditions in which it previously had been supposed to be either valueless or contra-indicated.

The sphere of electro-therapeutics is through general electrization still further extended, and embraces a large variety of conditions and indications which localized applications fulfil not at all or but very imperfectly.

RECORD OF MORTALITY IN BERLIN.

Translated for this JOURNAL by S. G. WEBBER, M.D.

JANUARY, 1870.

BIRTHS, 1593 boys, 1495 girls; total, 3088, of which 254 boys and 224 girls were illegitimate. 33 times there were twins.

491 couple were married.

Deaths 1886 (993 males, and 893 females). Under 1 year, 693; between 1 and 5 years, 307; between 5 and 10 years, 31; between 10 and 15 years, 9; between 15 and 20 years, 31; between 20 and 40 years, 300; between 40 and 60 years, 245; between 60 and 80 years, 223; between 80 and 90 years, 36; between 90 and 100 years, 4; over 100 years, 1;—under 15 years, 1040; above 15 years, 840;—age unknown, 6.

Cause of Death.—Born dead, 78 m., 48 f.; lack of vitality after birth, 53 m., 37 f.; old age, 19 m., 42 f.; suicide,[*] 14 m., 3 f.; sudden death, 1 f.; accident,[†] 14 m., 8 f.; puerperal fever, 14 f.; smallpox, 7 m., 6 f.; scarlatina, 3 m., 5 f.; measles, 10 m., 15 f.; thrush, 1 m., 2 f.; whooping cough, 6 m., 15 f.; gastro-nervous fever and typhus, 20 m., 18 f.; purpura, 1 f.; catarrhal fever, 11 m., 9 f.; rheumatism, 4 m., 2 f.; erysipelas, 7 m., 2 f.; induration of cellular tissue, 1 m.; diarrhœa and diarrhœa with vomiting of children, 27 m., 21 f.; inflammation of the brain, 50 m., 48 f.; gangrenous croup (diphtheritis), 15 m., 29 f.; membranous croup, 20 m., 9 f.; inflammation of the air-passages, 44 m., 31 f.; inflammation of the pleura and lungs, 63 m., 49 f.; of the heart, 1 m.; of the stomach and intestines, 2 f.; of the peritoneum, 2 m., 3 f.; of the liver, 1 m.; of the urinary organs, 6 m.; of the bloodvessels, 2 f.; of the abdomen, without mentioning the organ, 7 m., 10 f.; organic disease of the brain, 18 m., 9 f.; of the spine, 1 m.; of the heart, 14 m., 16 f.; of the large vessels, 1 m.; of the lungs, 11 m., 8 f.; of the liver, 8 m., 5 f.; of the stomach and intestines, 12 m., 8 f.; of the abdomen, without mentioning the organ, 6 m., 1 f.; hydrothorax, 4 m., 1 f.; ascites, 3 m., 3 f.; general dropsy, 8 m., 14 f.; Bright's disease, 3 m., 5 f.; diabetes, 1 f.; syphilis, 3 f.; scrofula and rachitis, 2 m., 5 f.; tubercle of the brain, 1 m., 2 f.; laryngeal and pulmonary phthisis, 175 m., 144 f.; intestinal phthisis, 2 m., 1 f.; chronic skin disease, 1 m., 1 f.; cancer of the stomach, 5 m., 1 f.; of the breast, 2 f.; of the uterus, 14 f.; of the abdomen, 2 m., 2 f.; part unknown, 4 m., 1 f.; medullary cancer, 1 m.; tetanus, 15 m., 11 f.; spasm of the glottis, 1 m., 1 f.; epilepsy, 1 m.; eclampsia of children, 61 m., 53 f.; cerebral apoplexy, 32 m., 31 f.; pulmonary and cardiac apoplexy, 14 m., 21 f.; nervous apoplexy (nervenschlag), 1 f.; rupture of an internal organ, 2 m., 1 f.; chronic articular inflammation, 1 m., 2 f.; strangulated hernia, 2 m., 2 f.; carbuncle, 1 m.; senile gangrene, 2 m.; gangrene, 1 f.; suppuration of cellular tissue and glands, 3 f.; fatal termination of surgical operations (pyæmia, &c.), 4 f.; other surgical diseases, 1 m., 1 f.; marasmus, 52 m., 39 f.; pulmonary paralysis, 16 m., 19 f.; teething, 6 m., 11 f.; anæmia, 1 f.; unknown, 14 m., 7 f. Total, 1886.

FEBRUARY, 1870.

Births, 1370 boys, 1312 girls; total, 2682, of which 246 boys and 222 girls were illegitimate. 18 times there were twins and twice triplets.

516 couple were married.

Deaths 1869 (974 males and 895 females). Under 1 year, 638; between 1 and 5 years, 325; between 5 and 10 years, 35; between 10 and 15 years, 17; between 15 and 20 years, 38; between 20 and 40 years, 269; between 40 and 60 years, 248; between 60 and 80 years, 246; between 80 and 90 years, 47; between 90 and 100 years, 1;—under 15 years, 1005; above 15 years, 849;—age unknown, 5.

Cause of Death.—Born dead, 51 m., 51 f.; lack of vitality after birth, 53 m., 36 f.; old age, 30 m., 61 f.; suicide,[*] 11 m., 6 f.; accident,[*] 26 m., 8 f.; flooding after delivery, 1 f.; puerperal fever, 5 f.; smallpox, 11 m., 10 f.; scarlatina, 2 m.; measles, 10 m., 15 f.; thrush, 2 m.; whooping cough, 9 m., 7 f.; gastro-nervous fever and typhus, 22 m., 24 f.; purpura, 1 m.; catarrhal fever, 16 m., 11 f.; rheumatism, 1 m.; erysipelas, 4 m.; scleroma, 3 m., 1 f.; diarrhœa and diarrhœa with vomiting of children, 27 m., 14 f.; inflammation of the brain, 51 m., 45 f.;

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[*] By hanging, 5 men; poisoning, 4 men, 3 women; shooting, 3 men; carbonic-oxide, 2 men.

[†] By drowning, 2 girls; burns, 2 girls; carbonic-oxide, 2 men, 2 women, 2 boys, 1 girl; buried by caving in of earth (verschütten) 1 m.; run over by cars, 1 man; other mechanical injuries, 6 men; 2 boys, 1 girl were found dead.

[*] By carbonic-oxide gas, 2 men, 1 woman; shooting, 1 man; hanging, 5 men; severing the radial artery, 1 man; poisoning, 5 women.

[†] From carbonic-oxide gas, 7 men, 4 women, 1 boy, 1 girl; frozen, 2 men; burns, 1 boy, 1 girl; shot in duel, 1 man; suffocated by gas, 3 men; run over, 1 man; other mechanical wounds, 8 men. Found dead, 2 boys, 2 girls.

gangrenous croup (diphtheritis), 21 m., 26 f.; membranous croup, 12 m., 10 f.; tonsillitis, 1 m., 3 f.; inflammation of the air passages, 36 m., 38 f.; inflammation of the pleura and of the lungs, 62 m., 58 f.; of the heart, 1 f.; of the spinal cord, 1 m., 1 f.; inflammation of the stomach and intestines, 1 m., 2 f.; of the peritoneum, 1 m., 1 f.; of the liver, 1 m.; of the urinary organs, 7 m., 6 f.; of the abdomen without mentioning the organ, 4 m., 11 f.; organic disease of the brain, 11 m., 7 f.; of the heart, 15 m., 18 f.; of the lungs, 3 m., 7 f.; of the liver, 3 m., 1 f.; of the stomach and intestines, 6 m., 11 f.; of the abdomen without mentioning the organ, 9 m., 2 f.; scorbutus, 1 m.; leucocythæmia (Weissblütigkeit), 1 m.; dropsy of the chest, 4 m., 5 f.; ascites, 1 m., 1 f.; general dropsy, 10 m., 11 f.; Bright's disease, 3 m., 6 f.; gout, 1 f.; diabetes, 1 m.; syphilis, 2 m., 1 f.; scrofula and rachitis, 4 m., 3 f.; tubercule of the brain, 1 m., 1 f.; laryngeal and pulmonary phthisis, 171 m., 137 f.; intestinal phthisis, 1 f.; cancer of the stomach, 5 m., 7 f.; of the liver, 1 m., 1 f.; of the breast, 2 f.; of the uterus, 9 f.; of the tongue, 1 f.; of the face, 1 f.; of part unknown, 1 m.; tetanus, 15 m., 10 f.; spasm of glottis, 2 m.; eclampsia of children, 59 m., 76 f.; cerebral apoplexy, 13 m., 13 f.; paralysis, 1 f.; rupture of an internal organ, 2 m., 1 f.; caries and necrosis, 1 f.; chronic arthritis, 2 m., 1 f.; strangulated hernia, 3 f.; senile gangrene, 1 f.; gangrene, 2 m.; suppuration of cellular tissue and of glands, 3 m., 4 f.; fatal termination of surgical operations (pyæmia, etc.), 3 m., 3 f.; other surgical diseases, 1 m.; marasmus, 56 m., 41 f.; paralysis of the lungs, 23 m., 30 f.; teething, 6 m., 4 f.; unknown, 12 m., 4 f. *Berliner Klinische Wonchenschrift*, May 23, 1870.

Bibliographical Notices.

The Pathology and Therapeutics of Mental Disease. By J. L. C. Schroeder van der Kolk. Translated from the German by James T. Rudall. London: Churchill. 1870.

This treatise, the last work of the great physiologist and "renovator of the Dutch Institution for the Insane," at Utrecht, was left nearly completed at his death, in 1863. It was commenced for the benefit of a private class, upon one of whom, Dr. Hartsen, devolved the duty of its completion and publication, in accordance with the last wishes of its author. Although eight years old at the time it comes to us in English, and lacking in the formality of more comprehensive works, it cannot but command attention, from the author's great reputation in matters concerning cerebro-spinal anatomy.

This work, of 158 pages, comprises two chapters only. The first, of 94 pages, which treats of the Physiological Anatomy of the Brain, is particularly valuable. A glance here and there will give an idea of its contents, and of Van der Kolk's distribution of the nervous functions.

In Section 2, he shows that the hemispheres cannot be the seat of perception or of the motor energy of the will, by arguments drawn from embryology, comparative anatomy, and pathology.

In Section 4, he remarks that "everywhere, when cells are found, the action proceeds from these, and where the effects are diverse, there will also the structure and composition of the cells be distinguished by peculiarities. Microscopical examination has already thoroughly confirmed this."

In Section 6, he elaborates the idea that all impressions from the outer world must be modified by the peripheral sensitive cells, which transmit their own peculiar method of action to the centres of perception, which are to be found exclusively at the base of the brain.

In Section 8, he discusses the question of localization of faculties in the cortex, and assigns to the anterior lobes the processes of ideation, and to the middle and posterior the emotional functions. He disbelieves in the possibility of further sub-division. It must be remembered that this chapter was written before the discussion of M. Broca's theory, in regard to the faculty of articulate speech, had reached its climax.

In Section 9, he adduces the proof of certain vivisections, by Schiff, in support of his opinion that the centres of perception, although in immediate contact with the mind, are outside the hemispheres, and that the motor centres are behind the corpora striata even. The will, he thinks, acts directly on the corpora striata, as well as on the hemispheres.

In Section 11, he treats at length of the cerebral circulation, and shows among others a new provision for the safety of the delicate cortical layer, in case of violent congestions. Not only do the capillaries of the pia mater dip into the cortex and emerge again, but to a large extent communicate directly with the veins in that membrane; thus allowing the blood to pass harmlessly away. In some congestions "the storm, as it were, sweeps away over us, without our perceiving it."

In Section 12, on the connection between mind and body, will be found much which is interesting. Here is no taint of shallow materialism, since a belief in an independently operating mind is distinctly affirmed. The limits of its action are found in the capabilities of the nervous apparatus. It can use such instruments only as are furnished it, and on the receptive side can perceive only such natural phenomena as are adapted for reception by the peripheral sense apparatus. As a practical inference from the action of the body on the mind, he advocates restraint in the severe forms of mania. The non-restraint system forced upon the superintendents of English hospitals by popular clamor is unphysiological in the extreme. It is opposed not only to the teachings of experience, but to sound theory Fortunately, in this country it has not yet been wholly interdicted.

An account in detail of eight cases of that rare form of disease, idiopathic pachymeningitis, closes the first chapter. The second is devoted to a rather brief consideration of the Pathology and Therapeutics of Mental Disease. He classifies insanity as idiopathic or sympathetic, and applies to the analysis of its various forms the principles laid down in the first chapter. There is nothing especially novel in the second chapter, except, perhaps, his statement concerning the frequency of diseased conditions of the colon in sympathetic insanity. The treatment recommended is largely based on the use of those old-fashioned remedies of bleeding and large doses of antimony. It is not impossible that the light of modern investigation may lend a new efficacy to means partially fallen into disuse.

T. W. F.

Medical and Surgical Journal.

Boston: Thursday, June 30, 1870.

VALE!

Our New Year's Greeting of six months ago, as originally penned, contained the statement—of very little importance to anybody but ourselves—that the connection of the Editor with this Journal would necessarily terminate with the close of the present volume. We erased the sentence at the request of the Publishers, though our understanding with them remained unaffected that we should be released from our duties here at the time which has now arrived.

We are free to say that we leave with regret. It is the quantity, not the quality of this editorial work which prevents us from going on with it. Our relations with that large portion of the profession to which we look up with hearty respect have been most agreeable. We have received from them that moral support without which our task would have been mere drudgery; and we have had much tangible assistance in the form of communications from some of the best observers and some of the highest authorities among them. We must beg also to record our acknowledgments to the publishers for the liberal manner with which they have seconded our efforts on behalf of the Journal. Finally, we tender to both readers and contributors our thanks for much indulgence toward our short-comings.

The Editorial management of the Journal passes, with the next volume, into the hands of Dr. Francis H. Brown, whose ability as a writer, enterprise and impartiality cannot fail to secure him success. We congratulate all parties that the present Assistant Editor continues in a position which it would be impossible for any one to fill more efficiently or acceptably.

THE QUESTIONS OF CHOLERA CONTAGION, INFECTION, AND SPONTANEOUS INVASION.

With reference to the above points, we translate some passages from the elaborate history of cholera which we have before referred to as in process of publication in the *Gazette Hebdomadaire*.

Says the author, M. Scoutetten, let us define the words before we use them. What is contagion? It is the transmission of a disease from one individual to another as the effect of mediate or immediate contact. Infection is the action exerted upon the economy by morbific miasmata spread abroad in the atmosphere. Spontaneous invasion defines itself. Can the appearance and transmission of the cholera be referred to one or the other of these modes of action? In order to reply to this question, we must in the first place recall the circumstances under which epidemic cholera made its appearance. Our researches have demonstrated that it showed itself suddenly in the month of August, 1817, in India, among the troops commanded by the Marquis of Hastings. * * * * Having reached the extreme limits of the Indian territory, it made a sudden bound, and appeared in December, 1818, at the capital of the Island of Ceylon. Then on the 15th of September, 1819, it broke out at the Mauritius, and in the month of December following it appeared in the neighboring island of Bourbon. It should be noted that these two islands are quite healthy and entirely isolated, while Madagascar, an unhealthy spot for Europeans and near to India, has never been visited by the cholera. Most of the diseases of Europe, of Asia, and of the New World, are, in the words of Dr. Vinson, totally unknown at Madagascar.

This irregular, fitful progress has been the same in all places. As has been said of it before, cholera has been everywhere like itself. Following it throughout the whole of India, in Russia, Poland, Prussia, England, we see constantly the same occurrences reproduced. Avoiding useless repetitions, as he says, M. Scoutetten takes up the course of events in Prussia, whither he was sent in 1831, to make special researches on behalf of the French Government.

Prussia had adopted stringent measures to resist the invasion of the cholera, but there, as everywhere else, they were powerless. The Oder crossed, the *cordon sanataire* passed, the cholera soon made its entry into Berlin. In the night of the 29th of August, 1831, at half-past 2 o'clock, the boatman Jean Wegener died upon a boat loaded with peat, having presented all the symptoms of cholera. It should be remarked that the boat of this man was stationed near Charlottenberg, two leagues distant from Berlin. The authorities assembled the physicians of the medical commission appointed to take measures against the propagation of the pestilence. That commission declared that Wegener had died of cholera. Consequently the boat of the deceased, and another belonging to a man who in the course of the night had approached the sick person, were kept isolated. A third boat, which had come no nearer than eight paces to the suspected craft, was not allowed free passage to Berlin till after a preliminary purification. The same day the authorities took measures to interrupt navigation upon the Sprée between Berlin and Spandau, and to subject to quarantine the boatmen who were found in the interval between those limits.

Nevertheless, on the 30th of August, at two in the night, the boatman Jean Chrétien Mater died, on a boat near the Schiffbauer dyke, after an illness of eight hours, his symptoms denoting cholera. On the same day, August 30, at five in the afternoon, a journeyman slater, named Bobach, was taken to the Charity Hospital at Berlin, by an agent of police. Although he was able to walk thither on foot, he died during the night. Soon the number sick with the disease was considerably increased. There were but three on the two first days. But, from the 4th to the 5th of September, there were 20; and during the 14th and 15th of the same month there were 63. Finally, on the 20th of Dec., the date of the cessation of the malady, there had been during the course of the epidemic 2276 cases, of whom 839 recovered and 1429 died. There were eight remaining under treatment.

At Berlin, as elsewhere, two different opinions were entertained among physicians. Some were contagionists, while others believed in infection. The arguments on the two sides were as follows:—If, said the partizans of contagion, cholera frequently attacks the bystanders and attendants of the patient, it must be admitted that the disease is contagious. Well! the facts observed at Berlin prove that the cholera often attacked the physicians and nurses. In the hospital of M. Bœhr, out of three *internes* in service, two had the cholera. Out of ten nurses, six were taken with it; three females and three males. One of the latter died. In the hospital of M. Casper, three female nurses were attacked with cholera; one *interne* died with it, and an apothecary had the disease. In the hospital of M. Romberg, the facts spoke still more loudly. Almost everybody was sick. M. Romberg himself was attacked with cholera. The three *internes* were more or less indisposed. The greater part of the male and female attendants felt the influence of the morbific miasmata. Such were the most important facts observed at Berlin [on this side of the question].

Now for the objections brought forward by the non-contagionist physicians. In the first place, say they, mark the rise and progress of the epidemic in Berlin. In the night of the 29th of August, a boatman dies of cholera near Charlottenberg. The authorities take the most searching precautions to prevent all communication, and yet the next night at two o'clock a second boatman dies of cholera in the city itself. On that same 30th of August a workman succumbs to the same malady. In fine, the cholera breaks out in all quarters. It becomes no longer possible to take cognizance of the circumstances of its development. How is this rapidity of communication to be explained? Can it be admitted that all those individuals had been in communication one with another? The supposition is not possible; since we know that they had been separated by great distances. The boatman Wegener, who died the 29th of August, could not have introduced the cholera into Berlin without going there. Now no advices indicate that he had been there. But if we admit it as demonstrated that he had visited the city, it would then have been in his clothes that he carried the germ of the cholera. But what becomes of this supposition when we consider that the physicians, who daily visited the hospitals, touched the patients, and opened the bodies, on leaving the establishments for cholera patients, circulated about the town, and were in communication with all its inhabitants, without going through a quarantine, without changing their clothes, and very often without fumigation, although, for form's sake, they were required before going out to purify themselves with chlorine. Certainly these circumstances were favorable to contagion in that from fifty to sixty persons went in and out of the hospitals every day. And yet not a single instance is cited leading to the belief that the cholera ever was transmitted in this manner.

By the side of these general considerations, M. Scoutetten places some special facts on behalf of the non-contagionists. Though some of them, or such, are matter of history, we quote them, as we have not seen them referred to of late.

The palace of Charlottenberg, the Royal residence, about two leagues from Berlin, had been kept completely isolated. All communication with it was intercepted, and it was not allowed to be approached within ten feet. In spite of this isolation, faithfully observed, a woman whose duty it was to make the beds in the palace, fell sick with cholera, and died the 10th of October. This fact was stated to our author by the chief inspector of police at Berlin.

Again, a woman who was nursing an infant six months old, had the cholera. In spite of the most urgent entreaties she would not consent to be separated from the unfortunate little creature. She died during the night, and the next day the child was found sucking the breast of its dead mother. The health of the infant was in no way affected. This happened at Radomsk, under the observation of Dr. Pulst. Two other cases, of a similar nature, were related to M. S. by Dr. Hardeyg, who gathered the account of them at Posen. In the first case, a woman named Beille Hirsch, thirty years of age, was taken sick the 19th of August, 1831, and was convalescent the 24th. The second, Rosina Balzacski, aged thirty-six years, was attacked with cholera Sept. 2d, and died the 4th. In these two instances, the infants did not give up nursing, and neither felt the slightest touch of cholera. It was for a long time believed, says M. S., that cholera does not attack infants, but facts prove the contrary. He saw a child of five weeks, Henriette Pakl, have the disease and recover.

The following fact is noted by the wayside. A woman at the full term of gestation was seized with cholera and gave birth to a child during the most violent action of the disease. The child at birth seemed well; but four hours after it had seen the light it had cholera and died. The mother, on the contrary, recovered.

It was in the low, damp, and ill-ventilated portions of Berlin that the malady wrought its worst ravages, the better quarters of the city, on the contrary, suffering small loss, the exceptions occurring in the persons of a few unfortunates, or in those addicted to excesses, or debauchery.

* * * * * * * *

May currents of air be a means of spreading the cholera? The partizans of infection allege it, while facts oppose the theory. M. Barth, though a contagionist, denies the influence of the winds in this connection, and asks, does the cholera morbus come to us from India suspended in the atmosphere and transported like the rain? After having examined this proposition in detail, he rejects it as inadmissible. Jameson, one of the most distinguished physicians of India, is thus quoted :—" I know not whence comes the evil, but it seems clear that its propagation is independent of atmospheric currents; for the disease has advanced from North to South, from Jaulna to Punderpoor, making 15 or 20 miles a day, going at the same rate as travellers [a circumstance for the contagionists], and proceeding in a direction opposite to that of the most violent and persistent monsoon we have ever experienced." In presence of these facts it is evidently impossible for the most decided partizans of infection to prove that the miasmata are capable of being transported by the wind. Further, if there be miasmata in the atmosphere they do not reach to a high level. It is sufficient, indeed, to place cholera patients [choleriques] on a mountain of moderate height in order to arrest the disease and prevent its transmission. Cholera has not shown itself as an epidemic in places situated more than 600 *metres* above the level of the sea [*metre* = 1·093633 yards].

Accompanying the paper in the *Gazette* is a colored pathological map of France, borrowed from a work of M. Armieux, showing the Departments which have never felt the cholera; those where it has prevailed once; those where it has been twice; those it has attacked three times; and those it has visited four times. From this map it appears that nine Departments have never been tainted with cholera; that 19 have had it once only; 8 twice; 38 three times; and that 12 have been invaded four times. * * * *

The grouping of the Departments, says M. Scoutetten, which have been spared by the cholera is very remarkable, particularly if we join to them those two which have been attacked only once and in small measure. The immunity of the Departments exempt from any attack of the disease, he finds in their elevated site, and probably also in some unknown cosmic conditions.

Per contra, he shows the Departments of *Bouches-du-Rhône*, of the *Seine*, of the *Loire-Inférieure*, &c., to have been invaded four times, and explains this by their low situation, their humidity, and by the constant development of miasmata which he alleges to exist, and which he refers to humidity and the heat which prevails there in summer. It will probably be objected, he adds, that the Department of *Vosges* has been also attacked four times. The fact is exact, taking the statement as it stands; but it requires to be analyzed. There are in *Les Vosges* very moist regions, where the lakes *Gérardmer*, *Retournemer*, &c., are situated; also very thick woods. It is in these regions that cholera has especially raged, whilst several other places, particularly *Plombières*, have been entirely spared. This example, and many others analogous, should convince us that we cannot rely on attaining an accurate decision by taking facts in the gross, and without considering the special conditions which furnish forth each by itself. To obtain exact statistics it is not enough to establish them as for Departments; they should be collected as applied to communes.

While referring the appearance of cholera to a spontaneous explosion produced by telluric agency, thus explaining the enormous leaps of the disease, some of which are even from one side of an ocean to the other, M. S. does not absolutely reject infection and contagion; but considers them as only secondary agents of transmission. He remarks that here again facts carefully observed should be substituted for theories which are the offspring of the imagination.

As regards infection he says, it is noticed that a certain number of *employés* are taken sick in the hospitals, although the majority experience no attack of the malady. But, here as elsewhere, the individuals who succumb are those predisposed to the pest by a chronic intestinal affection. * * * *

Whatever opinion may be entertained, M. Scoutetten declares that the transmission of cholera by *contact* has not been demonstrated; and repeats the assertion that when the malady develops itself, it is always under the influence of a telluric condition the nature of which we are unacquainted with.

THE AMERICAN MEDICAL ASSOCIATION.—The medical public seems to condemn, with one voice, the late meeting of the National Medical Association. We here append comments on the proceedings, extracted from the editorial of the leading medical journal of California, and also extracts from a letter to us which speaks for itself and which evidently comes from an unprejudiced observer. We wish the infliction which is impending might be averted from the well-known hospitality of our California brethren.

"We give the report of the proceedings of the National Medical Association, held in May last, at the National Capitol, as given in the New York *Medical Gazette*:

"Twenty-one years ago this Association was organized with the best wishes and highest hopes of the medical profession. What has it done in all that time? Year by year it has dwindled, until the hopes of its founders have ended in shame and humiliation. No subject of higher consideration than the fee that should be charged for examination for life insurance companies, or the color of the skin requisite to membership to medical societies, was definitely settled.

"The proceedings upon the whole would do credit to some Trade's Union Convention, and its objects seem to have been no higher. If the profession at large has been deteriorating as fast as this national association during the same time, may God have mercy on us!

"The Association did agree upon one other thing, which fills us with apprehension. It resolved, upon the solicitation of some physician, who was at Washington on some lobby business connected with a hospital contract, who, it seems, had credentials sent to him by the so-called San Francisco Medical Society, to invite them —to meet next year in this city.

"We shall be glad to see them, we will show them the Seal Rock; Woodward's Gardens, our magnificent and unique City and County Hospital, and do the best we can to make their stay as pleasant as possible. The San Francisco Medical Society will furnish a steamer to take them about our beautiful harbor. The President of the San Francisco Medical Society will be delighted to take them to Yo-Semite Valley; his overflowing wine-cellars will make their hearts glad; but we hope the 'nigger question' will not be raised here, for we are not all white. Some Caucasian physicians, too, do attend African patients, and the question might be raised—but we will not borrow trouble, 'sufficient for the day is the evil thereof.'"—*Cal. Med. Gazette.*

MR. EDITOR,—In your No. for May 26, 1870, p. 370, note, your correspondent characterizes the resolution of the American Medical Association at its last meeting, on the subject of anæsthesia, as an attempt to settle by the "snap" judgment of a kind of caucus vote, the question of the discovery of that important process. The criticism is certainly just. I was in attendance upon the meetings of that body, and desire to give you the simple facts in the case, that the profession may see how the matter was managed, and what weight their action should have.

A resolution, giving the entire credit of the discovery of practical anæsthesia to Dr. Horace Wells, was introduced at the first session of the Association by a member. It was referred to the Section on the Practice of Medicine and Obstetrics, and was, I think, brought up in the first meeting of that Section. The great doubtfulness, to say the least, of the justice of the resolution, and the extreme absurdity of our attempting to decide so vexed a question, then and there, induced me to coöperate with other members in directing it to be returned to the Association without discussion and without the expression of the opinion of the Section upon its merits.

There was another reason for this course; it was evident to me that there was a bevy of gentlemen in attendance with the special business in hand of putting this resolution through. They had with them their documentary evidence, if a bald, imperfect and inconclusive statement of their case deserve that name, which, one-sided and therefore unfair, had been scattered freely among the members of the Association. That it was intended to engineer the thing through was still more evident when, soon after the resolution had been thrown out, a member appeared and inquired of the presiding officer whether the subject had been dismissed. When answered in the affirmative, he left the Section with loud expressions of indignation, *calling upon his auxiliaries to go out with him, which they did*. A more impudent and discreditable proceeding I never witnessed.

The next day I did not go into the Section till near the close of its session. I then found it what politicians call a *packed* body, got together and managed for the special purpose of passing the resolution in question. The claim of Dr. Wells had been fully presented, the other side ignored, and a sort of public opinion thereby formed in the Section. It was evident to me that resistance was then useless. The resolution was passed without opposition, a great part of those voting knowing little of its merits and caring less, and influenced mainly by a good-natured desire to gratify the gentleman who had pushed the matter with so much zeal. The next day the subject was again brought before the Association in general session, and the resolution of the Section was adopted, after very little discussion and with trifling dissent. * * *

How came they to allow this question to be so hastily passed upon?

The answer is, that every body had become disgusted with the conduct of the Association. It was too much like a bear garden. * * * * *

Our proceedings were about as tumultuous and disorderly as a ward caucus, or the audience of a street preacher. But for the skill, good temper, and unwearied efforts of the Secretary, Dr. Atkinson, everything would have been at sea.

A better presiding officer would have saved us from the perpetual intrusion of the negro question, either by bringing us early to a decisive vote upon it, or, failing in that, by shutting the door against it.

* * * * * * * *

If our Association is not to degenerate every year, and become a source of discredit, rather than of honor to the profession, it must adopt the course of many similar bodies, in selecting some member who has a knowledge of parliamentary rules and a talent for enforcing them, as one of the Vice-Presidents; retaining him there year after year, and giving him the ordinary occupancy of the chair in business deliberations.

C. C. P. CLARK, M.D.

Oswego, N. Y., June 10, 1870.

CASE OF POISONING BY BINIODIDE OF MERCURY. By M. K. TAYLOR, Captain and Assistant Surgeon, U. S. A., Fort Gratiot, Mich.—From the reports submitted at the Annual Meeting of the St. Clair and Sanilac County (Mich.) Medical Society, the following extracts are made:—

Private G. E. L., Co. "H," 1st U. S. Infantry, aged about 25 years, of small stature and rather spare habit, presented himself at the post hospital on the morning of June 20th, 1869, suffering from syphilitic ozæna of the left nares. He stated that it had been troubling him for some time, but not until quite recently had the discharge become offensive. The nose was considerably swollen on that side, the discharge quite profuse, and occasionally a little bloody. He contracted syphilis two years since. The following prescriptions were made:—

℞. Potassa iodidi, ʒij.;
Hydrarg. biniodidi, gr. iv.;
Spts. Lavendulæ comp., flʒij.;
Syr. simp., q. s. ft. ℥iv. M.
Sig. A teaspoonful after each meal.

℞. Hydrarg. bichloridi, gr. ij.;
Aqua pur., ℥ij. M. Ft. sol.
Sig. A half ounce to be injected into the nasal cavity three times a day.

A rapid improvement followed this course of treatment, but on the 24th he re-appeared, suffering from intermittent neuralgia of the head, face and chest of the right side. Twenty-five grains of quinine were prescribed, in doses of five grains each, which arrested the disease by the next morning, when the bitter tonics were directed to be taken after meals for a few days. On the 27th he appeared at the sick call again, and he seemed about able to return to his usual duties. The nasal discharge had entirely ceased, the offensive odor was all gone, and the swelling of that side of the nose was reduced to nearly its normal condition. I directed the continuance of the remedies. He was allowed to take these to his quarters from the beginning, being instructed, however, as to their nature, and admonished to take proper care in their use. It would seem, from my subsequent investigations, that the teaspoon he used was rather small, so that he was not taking the eighth of an ounce at a dose as I had directed He showed the bottle to one of the corporals of his room, just as he took the poison, and the quantity remaining, as described by him, must have equalled at least two ounces. After exhibiting it he remarked, "*he would finish that medicine anyhow.*" He had, also, during the day, expressed a wish that he were dead to several persons in the garrison, but in such a jocular way that no one paid any attention to it. Having swallowed the medicine he proceeded to the hospital and asked the steward to refill the prescription, then leaving the bottle he returned to his quarters and lay down on a low bench near his bunk. In about twenty minutes his comrades noticed that there was something peculiar about him, and tried to get him up, but he was insensible, breathing heavily, and frothing some at the mouth. Becoming alarmed, the non-commissioned officer in charge notified me that he was very ill, and said that he thought Lee had, intentionally, taken poison. I saw him immediately. He was wholly insensible, had stertorous respiration with a little frothing at the mouth, respiratory action nearly normal, except slightly jerking with the inspiratory movement, pulse 80, moderately full and soft, general turgescence of the face and extremities, the lips partly closed, flabby and of a bright crimson, eyelids closed, but on opening them the eyes were fixed, looking directly forward, pupils quite large, insensible to light, and the lids, unsupported, slowly returned to the former condition. The head was thrown moderately back, fixed, and there was a slight tonic spasm of most of the posterior muscles of the trunk. On attempting to raise the head, the whole trunk was raised at the same time, flexion taking place at the hips only. Extremities flexible and warm, which, together with the face, presented a decided venous turgescence, and accompanied by a flush, in places amounting almost to a rose color; upon the anterior aspect of the chest this was also very marked. While making preliminary arrangements to remove him to the hospital he had spasms of the lower extremities, involving the flexors below knees, the knees being flexed on the thighs, the muscles of the plantar surface of the foot and flexors of the toes being very tense, hands affected but little, amounting only to a slight rigidity; this extended to the whole body, accompanied by moderate opisthotonos. The spasm lasted scarcely a half minute, and was then followed by very decided short, quick, spasmodic action of the transverse muscles of the abdomen, occurring at irregular intervals of a few seconds; this was so much so as to produce an exceedingly flattened condition of this region. There was no effort at vomiting. The functions of deglutition were entirely paralyzed, so that on introducing fluids into the mouth they passed directly into the trachea producing strangulation, and threatening suffocation. I had him removed immediately to the hospital. When laying him on his cot a much more severe spasm occurred, amounting to a moderately severe epileptic convulsion, and difficult to be distinguished from the ordinary exhibition of that malady, except in the subsequent recurring spasmodic actions of the abdominal muscles. Immediately after this the venous distention and general capillary congestion were considerably increased, the pulse smaller and more feeble, insensibility, flabby lips and louder stertor, with depressed temperature of the extremities continued, the rhythm of the pulse and respiration remaining unchanged, as well as the rigidity, and he had all the appearances of impending dissolution.

The treatment consisted first in administering about ℥iv. aqua calcis diluted with an equal quantity of water. Failing to get him to swallow the fluid in the ordinary way, and while the stomach pump was being arranged, I placed him in a recumbent position, and putting a small quantity of fluid in the mouth, then closing the nostrils, an effort at deglutition was induced, so that by repeating the process I succeeded in getting the whole amount down. This I followed by a solution of bi-carb. potassa, when regurgitation of the contents of the stomach in small quantities occurred, corresponding occasionally with the abdominal muscular contractions, at other times not. It was not vomiting as generally observed, but a quick regurgitation, such as one often feels after a hearty meal, when the contents of the stomach are somewhat acrid, and are thrown up, accompanied with some gas. In the course of fifteen minutes about a pint had been discharged by this process with manifest relief, as he began to be more conscious of what was required of him, though deglutition was still difficult. This was followed as fast as practicable with two drachms of fluid ext. ipecac, given in a glass of warm water. But a singular phenomenon was now manifested, consisting chiefly in this, that so often as he attempted to swallow, the fluid would pass seemingly down the œsophagus nearly to the stomach and then, instantly, be rejected by regurgitation with a small portion of the contents of the stomach. This peculiarity was manifested only at such times as he attempted to swallow. Before I gave the ipecac another slight convulsion occurred, followed by a diminution of the spasmodic action of the muscles of the abdomen, if he was allowed to remain undisturbed. By closing the nasal orifices I succeeded in getting down most of the ipecac, when I permitted him to lie quietly for a few moments. He soon relapsed into a state of stupor, with his eyes partially closed and fixed as at first, but with less muscular rigidity of the posterior muscles of the trunk. At the expiration of about ten minutes I had him aroused, when on repeating a full dose of the ipecac he vomited freely, became conscious of his condition, and complained of intense pain in the region of the umbilicus and below, but said nothing of any distress in the stomach. In the evening all the distress in the abdomen had in a measure ceased, and he then complained of his throat. Since his recovery, he says this distress of the throat was a sense of constriction, and by his own sensation located it in the larynx, though he says it hurt him when attempting to swallow. After the free vomiting he was allowed to rest for a half hour, when sulphate of morph., in doses of $\frac{1}{6}$ of a grain with $\frac{1}{4}$ of a grain of ipecac, was given every fourth hour for 12 hours, and after that a free saline to open the bowels. Ptyalism appeared in about thirty hours, but not very severe, and the tongue was reddened along the middle, fissured and dry. There was no disposition to diarrhœa. The second day he began to ask for food, when milk and lime-water were allowed, and he convalesced rapidly. I may remark that the nasal syphilitic ulcerations improved equally fast.

This case of poisoning presented the aspects of profound sedation. The muscular spasms of the abdomen may be regarded as efforts in part to produce emesis, but the sedative action of the agent was so powerful on the stomach as to arrest the usual muscular contractions of that organ, and prevent the discharge of its contents until the poison was rendered less active by its partial chemical decomposition, and conversion into prot. iodide. When he became rational he stated that the first sensation in the stomach was a slight nausea soon followed by some pain, though not very severe, and this by a very severe pain in the back part of the neck, with excessive secretion of saliva, after which he remembers nothing until the operation of the emetic. It was only a few moments after this frothing at the mouth had commenced, from the account given by his room-mates, as well as from his non-recollection of events, that he became insensible, and remained so until relieved. The full poisonous effects were exhibited in about fifteen minutes after he took the medicine; and from that time until he regained his consciousness was over three quarters of an hour. The quantity of the poison taken must have been quite two grains of the biniodide of mercury and one drachm of iodide of potassa.

Nearly all of the works on toxicology say that the action of biniodide of mercury is analogous to that of bichloride. It is very clear, however, that in this case such did not obtain. That the agent is equally prompt, powerful, and dangerous there can be no doubt; indeed I am not sure but it is more rapid in its effects from the fact that unlike corrosive sublimate it forms no precipitate with albumen, and therefore remains soluble in the stomach in the presence of any albuminous matter in its contents.

The case taking me somewhat by surprise, I had to be governed solely by my prepossessions in regard to the chemical relations of the poison, thinking for the moment that the carbonate of potassa obtained by the decomposition of the bicarbonate with the lime-water would decompose and reduce it to a still less active agent than the prot. iodide. A very casual examination of the subject, however, led me to correct such impressions. The mercury cannot be separated from its iodine affinities in the presence of the iodide of potassium, so far as I am aware, but by sulphuretted hydrogen, either free or in combination with an alkaline base, as with potassa or ammonia, when the sulphide of mercury is thrown down. Strictly speaking, therefore, the sulphides of ammonia or potassa, or agents of like character, are its only antidotes. The sulphide of potassa is the most eligible, as it can be administered in doses of five or six grains largely diluted, with safety; a quantity which would be quite sufficient to neutralize an equal amount of the poison.

The works on toxicology direct us to employ albumen freely in poisoning by corrosive sublimate with the view of forming an insoluble precipitate with the agent, and say further that the treatment for poison by the biniodide should be the same. In this there could not be a greater error. The latter forms no precipitate with albumen; on the contrary, where albumen of the egg has been partially coagulated by being kept for some time in connection with lime-water, or salt, or the usual means of preserving eggs for winter use, the biniodide in its solution with iodide of potassium renders it soluble at once, and the effects are such that the reactions of the sulphide of potassa are greatly delayed; indeed it requires several hours to obtain a precipitate of the mercury in the presence of albumen, and not until the lapse of a whole day is the biniodide of mercury fully decomposed. It is clear, therefore, that albumen should not be given as an antidote in this form of poisoning, for it shields the agent from the action of remedies which under other circumstances promptly decompose it and render it comparatively inert.*

As biniodide of mercury is becoming a popular remedy in the treatment of diseases of syphilitic origin, and mistakes are liable to occur, it would seem necessary that our toxicologists should give this subject a more thorough investigation and indicate to the profession some additional means of counteracting its baneful effects. Not only this, but I am fully satisfied that if its peculiar and nearly painless or stupefying action were more fully understood by the people at large, those seeking the means of self-destruction would choose this in place of almost any other, save perhaps chloroform and opium. Its sedative and stupefying action on the nervous system is appalling when taken in over-doses, and only the most prompt and efficient efforts will avail in saving life. So far as my means of judging indicate, the employment of liquor potassa, solutions of carb. potassa, extemporaneously prepared, lime-water followed immediately by bicarb. potassa, and the sulphide of ammonia or potassa, the latter being the better, followed by emetics or the stomach pump, constitute our chief antidotes.

The extreme rarity of casualties of this kind—no cases being reported, according to the leading works on medical jurisprudence—has led to neglect on the part of toxicologists and chemists in determining more explicitly, in varying emergencies, the best course to pursue in the treatment. My own means at command are far too limited to enable me to fix upon anything more definitely as an antidote, or to suggest a more efficient treatment when the articles above-named are not at hand. I have little faith in emetics alone if the poison has been taken long before the patient is seen by the medical attendant.

I have spoken of the poisonous agent in this case as the biniodide of mercury, though, chemically speaking, it is a solution of the hydrargyro-iodide of potassium. Inasmuch, however, as we prescribe it as a biniodide, I prefer so to consider it.

Criminal Abortion?—Rupture of the Uterus.—An inquest held in Islington upon the body of a woman who had been attended by two surgeons, one of whom is said to be a homœopath, has resulted in a verdict that "deceased died from an operation performed on her, and that that operation was to procure abortion; but how or by whom that operation was performed, there is not sufficient evidence to show." The surgeon on whom the suspicion rested did not make his appearance. He is said to be an old practitioner, who has virtually retired from his profession, and there does not appear to have been any pecuniary motive for the performance of a criminal act. All that came out was that he performed some operation on the Monday, which he himself said was for piles. The woman died on Thursday, after exhibiting symptoms of peritonitis, and after death the uterus was found to be ruptured posteriorly, while a four months' fœtus and the placenta were found lying in the abdominal cavity. There was no laceration of the vagina, nor any sign of injury to the mouth of the uterus. Dr. Popham, who made the *post-mortem* examination, declined to give a definite opinion as to whether the rupture had occurred naturally, or whether it had been produced by an instrument tearing through the organ. His hesitancy arose from the fact of cases being on record in which rupture of the uterus had occurred during the early months of pregnancy. He stated, however, that no operation for piles had been performed. The result of the inquiry is not satisfactory, inasmuch as a good deal has not been explained. The tissue of the uterus was said to be healthy. The same is said to have been the case in an instance of spontaneous rupture at the fourth month recorded in the *Glasgow Medical Journal* for October, 1861. If this rupture had really been caused directly by any instrument, as suggested, the force used must be such as it is difficult to imagine any educated surgeon would use with the object of procuring the expulsion of the fœtus. On the other hand, a rupture of a healthy uterus at the fourth month resulting from efforts of expulsion originally induced, would be a curious event. The woman was a married woman, living apart from her husband, and she is said to have had a child before.—*Lond. Med. Times & Gaz.*

Munificent Bequest.—At a recent meeting of the New York County Medical Society, Dr. John H. Griscom delivered the following address:

It is with great pleasure that I have recently learned of the extraordinary generosity for the benefit of a hospital in this city, manifested by a foreigner who has never been present here. I refer to a gift of $68,000 for the German hospital in 77th street, which sum was sent to the trustees thereof by a young German nobleman, viz. Baron Frederich Von Diergardt, a resident of the city of Bonn, in Prussia. This very happy manifestation of a foreigner's liberality was unaccompanied by any restrictions. He suggested that no distinction should be made as to the nationality or religion of the individuals received at the hospital, and that Bibles should be furnished them in the German, French, and English languages.

Such a demonstration of the liberality and profoundly good spirit of a human being who has never visited this country, yet feeling that the inhabitants of this land require consideration and professional care for the safety of their health and lives, as they do also in all other nations by the medical profession thereof, it is very important that the profession of this city, whose service has been so very kindly and generously appreciated by him, should demonstrate to this noble fellow-creature their very high appreciation of his remarkable nobility. I, therefore, propose that our appreciation of this great liberality be manifested by this branch of our profession, by the passage of a resolution, signed by the President and Secretary, and transmitted to the noble gentleman.

Resolved, That the earnest appreciation, and the cordial thanks of the New York County Medical Society are hereby tendered to Baron Frederich Von Diergardt for his very liberal donation for the assistance and encouragement of the institution entitled the German Hospital of the City of New York.—*Med. and Surg. Reporter.*

Excision of Joints in Disease.—At the adjourned debate on this important subject at the Royal Medical and Chirurgical Society on April 20th, Mr. Callender said he thought it better to have the limb slightly flexed than straight in excision of the knee-joint. Mr. Willett said that at St. Bartholomew's, in six years, there had been twenty-two excisions, with one death; thirty-eight of the knee, with eight deaths; whereas in one year there were ten excisions of the knee without any death. Mr. Hancock said that in the great majority of cases of hip-joint disease there was no dislocation, even although much disease existed. Mr. Savory did not approve of operating at the stage recommended by Mr. Hancock; but approved far more of extension to alleviate symptoms. Mr. Smith remarked that it was curious that there were no advocates of amputation in the room. Among the better classes joints are rarely destroyed. Mr. Gant said excisions were for early disease, amputation for late, when the system was worn out.—*Dublin Medical Press and Circular.*

The Action of Urine of the Tissues.—Professor G. Simon, *Deutsche Klinik*, has made experiments on this subject. He remarks that it has been a dogma in surgery, that urine, whatever may be its reaction, has a destructive action on tissues not protected by an epithelial covering. He injected subcutaneously in rabbits pure acid urine. It was absorbed without any apparent bad effect. Operation wounds moistened with fresh urine healed by primary intention.—When ammoniacal urine was injected, even though it had been filtered, abscesses were formed, and the skin over them became gangrenous. In view of these results, the gangrene which appears so rapidly in cases of infiltration of urine, must be ascribed to the mechanical action of the fluid driven forcibly among the tissues, so as to tear or compress the bloodvessels. In plastic operations on the urinary or sexual organs therefore it is unnecessary to leave a catheter in the bladder so long as the urine is acid, whilst such operations should not be performed, if possible, when the reaction is alkaline.—*Ibid.*

How Abscesses are Managed in Vienna.—According to the Vienna correspondent of the *Chicago Medical Examiner*, opening abscesses and buboes under water, and applying plaster of Paris, is being tried here with satisfactory results.

Medical Miscellany.

Harvard University.—At the Annual Commencement on the 28th inst., degrees were conferred as follows:—

Doctor of Medicine.—Frank Marcellus Blodgett, George Levi Brown, Henry Thacher Boutwell, Herbert Boyd, Herbert Codman Clapp, Augustus Tupper Clarke, Michael Emmett Connelly, John Disbrow, William Gilson Farlow, Chester Irving Fisher, Charles Follen Folsom, Henry Joseph Gaffney, Thomas Farrie Goddard, Stephen William Hayes, William Heron, Israel Thorndike Hunt, Charles Fessenden Nichols, Edward Page, Frederic Davis Perry, Abner Post, James Jackson Putnam, Charles Bailey Shute, James Alfred Spalding, Frederick Henry Thompson, Melville Cox Towle, Rollin Clayton Ward, Charles Henry Warner, Geo. Otis Warner, Leonard Wheeler.

Dental Medicine.—John Thomas Codman, Wm. Francis Davis, Geo. Franklin Grant, Daniel Grout Harrington, Samuel Franklin Ham, Thomas Wilson Hogue, Timothy Otis Loveland, William Henry Noyes, George Luther Parmlee, William Henry Thornton, Francis Edward Ward, Charles Wilson.

The Maine Medical Association.—At the annual meeting of this Association, held at Bangor, June 28, the following-named officers were elected for the year 1870–71:—Dr. B. F. Buxton, of Warren, President; Dr. Eugene Sawyer, first Vice-President; Dr. P. S. Haskell, second Vice-President; Dr. S. H. Weeks, of Portland, Secretary; Dr. T. H. Foster, of Portland, Treasurer.

Standing Committee—Drs. T. H. Brown, of Paris; H. N. Small, of Portland; A. F. Page, of Bucksport; M. C. Wedgewood, of Lewiston, and J. T. Nutting, of Hallowell.

Committee on Publication—Drs. S. O. Hunt, J. F. Dana, and S. H. Weeks, of Portland; J. W. Toward, of Augusta; and A. P. Snow, of Winthrop.

Monument to Sir James Y. Simpson.—We are glad to hear that there is a proposition on foot for placing a bust or other monument of Sir James Y. Simpson in Westminster Abbey. If ever a man has earned a place amongst the departed great of the nation it is he whose loss the medical profession is still deploring. There can be no doubt that a warm response to an appeal for the necessary funds will be made as soon as the proposal is fully announced.—*London Med. Times and Gazette.*

Galvano-cautery.—Dr. Sedillot is much in favor of galvano-cautery in many operations, because tissues divided by this means do not ache after the operation, less blood is lost, there is less danger of purulent absorption afterwards. A current of electricity passed through red-hot platina wires or plates cuts through tissues as easily as a bistoury.—*Dub. Med. Press & Circular.*

Variola in Paris.—No less than 195 persons died of variola in Paris in the week ending May 21st out of hospitals. But one fourth of all deaths in that city occur in hospitals, so that the mortality from this preventable disease must have been terrific. We wish some of the stupid anti-vaccination party would go over to Paris and walk the hospitals at present for a week. If not destroyed by the disease, at any rate we should hear less of their foolish ranting.—*Ibid.*

Medical "Wrinkles."—The quaint and practical Thomas Inman, M.D., of Liverpool, in one of his readable essays on the "Restoration of Health," thus remarks:—"Do you wish to ascertain the health of a baby, feel the condition of its buttocks. If these are firm and elastic, one may always be sure that the little one is strong and well; but if, on the other hand, they are soft, as if they were boiled turnips in a bladder, it is certain that the child is out of sorts."—*Med. Record.*

The Title-page and Index to Vol. V. will be sent to subscribers in next week's issue.

Readers will perceive that extra pages to the number of 88 have been given in the volume now brought to a close.

During the summer months, the clinic for Diseases of the Ear at the Boston Dispensary will be held on Monday, Wednesday and Saturday of each week.

To Correspondents.—Communications accepted:—Results of the Injection of Parasitic Spores into the Blood of Animals—Diagnostic Value of the Tuning Fork in Diseases of the Ear—Forcible Intrusion of a large Stone into the Abdominal Cavity and Removal, with Recovery.

Died,—In Cincinnati, Ohio, June 3d, Dr. Landon C. Rives, in the 80th year of his age.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending June 25, 1870.

Cities and towns.	Number of deaths in each place.
Boston	73
Charlestown	14
Worcester	13
Lowell	15
Milford	4
Chelsea	6
Cambridge	10
Salem	6
Lawrence	8
Springfield	5
Lynn	4
Fitchburg	3
Taunton	5
Newburyport	4
Somerville	7
Fall River	14
Haverhill	4
	195

Prevalent Diseases.	
Consumption	26
Pneumonia	12
Cholera infantum	6
Scarlet fever	4
Dysentery and diarrhœa	5
Typhoid fever	5
Measles	2

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending June 25th, 73. Males 38—Females 35.—Abscess, 1—accident, 5—apoplexy, 1—congestion of the brain, 1—disease of the brain, 3—inflammation of the brain, 1—bronchitis, 2—cancer, 1—cholera infantum, 4—consumption, 5—cyanosis, 2—debility, 5—diarrhoea, 4—diphtheria, 1—dropsy, 3—drowned, 2—erysipelas, 1—scarlet fever, 2—typhoid fever, 2—hip disease, 1—intemperance, 2—jaundice, 1—disease of the kidneys, 2—laryngitis, 1—inflammation of the lungs, 5—marasmus, 1—measles, 1—old age, 4—paralysis, 1—pleurisy, 1—premature birth, 1—rheumatism, 1—disease of the spine, 1—sunstroke, 1—unknown, 3.

Under 5 years of age, 27—between 5 and 20 years, 9—between 20 and 40 years, 16—between 40 and 60 years, 13—above 60 years, 8. Born in the United States, 44—Ireland, 18—other places, 9.

From July, 1870, to January, 1871.

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H. H. A. BEACH, M.D., ASSISTANT EDITOR.

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DIAGNOSTIC VALUE OF THE TUNING FORK IN DISEASES OF THE EAR.

By C. J. Blake, M.D., Boston.

In many cases of diseases of the ear where there is a functional disturbance, in addition to the objective examination, auscultation by means of the otoscope and Eustachian catheter, and tests of the hearing power with the watch, repeater and musical tones, the examination as to the perception of sound as conducted through the bones of the head is absolutely necessary to a correct diagnosis. This may be done in several ways. By pressing a watch or repeater upon the temple behind the ear, or holding it between the closed teeth; and where the hearing is very much impaired, by placing a metronome upon the top of the head; or by bringing the head in contact with some musical instrument, a piano, for instance, or better still a harmonium which gives a continuous sound of uniform intensity.

In testing the perception of sound conducted through the bones of the head, we cannot rely on either one of the two classes of sounds above mentioned, sharp sounds, or musical tones, alone, as the degree of perception of either one or the other is very variable, and in some cases the ticking of the watch will be plainly heard while the musical tone is scarcely perceived, and *vice versa*. For the production of musical sounds in this connection, the tuning fork is the most convenient instrument, as with it we can not only obtain a considerable range of tone, but also regulate the intensity and duration

That a vibrating tuning fork brought in contact with the head is heard most clearly in the ear which is closed by pressure of the finger, or by a wad of cotton wool placed in the meatus, was first demonstrated by Weber. The reason of this is twofold. The sound-waves are prevented from passing out at the meatus on the obturated side, and they are reflected from the confined air in the meatus back upon the membrana tympani and ossicula and so communicated to the labyrinth.

Politzer further further states that the vibrations are communicated directly to the membrana tympani and ossicula and to the air in the tympanic cavity, and so transmitted to the labyrinth.

Erhard,* in his treatment of this subject, leaves the two latter hypotheses entirely out of consideration, and avers that the only communication of sonorous vibrations to the labyrinth is directly through the bones of the head, and deduces therefrom as a rule for diagnosis that "the perception of sound conducted through the bones of the head informs us as to the integrity of the nervous apparatus."

A conclusion which Schwartze does not hesitate to pronounce as "utterly valueless in a scientific point of view."†

Upon the fact observed by Weber is based the practical application of the tuning fork to diagnostic purposes. From it we may infer that in those cases where the communication of sonorous vibrations to the labyrinth is prevented by pathological changes in the meatus or in the middle ear, the tones of the tuning fork placed upon the head will be most plainly heard in the ear in which such changes exist, provided there is not at the same time an affection of the labyrinth. In cases where both ears are similarly affected the tuning fork will be heard in the worst ear. In affections of the meatus alone, the tuning fork will be heard more or less distinctly according as the meatus is more or less obturated.

Where there is a collection of cerumen, for instance, in one ear, we are able to demonstrate this very clearly, and to determine moreover whether the cerumen plug is the only cause of the diminution of hearing. The presence of large masses of cerumen completely filling the meatus is not unfrequently accompanied by affections of the middle ear, and secondarily of the labyrinth.

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* Erhard. Klinische Otiatrie, Berlin, 1863, p. 87 et seq.

† Schwartze. Archiv fur Ohrenheilkunde, bd. i. hft. 2, p. 91.

In the case of closure of the meatus on one side, if the tuning fork placed upon the head is heard most distinctly in that ear, we may infer that the labyrinth is intact; if, on the other hand, it is best heard in the ear which is free, we may infer the contrary, and govern our prognosis accordingly.

A still further use of the tuning fork may be made in the diagnosis of diminished permeability and occlusion of the Eustachian tube. The vibrations will be perceived on the side where the Eustachian tube is closed, and when both are affected, on the side where there is the least permeability. The reason being that as a result of the gradual absorption of the air in the tympanic cavity, the membrana tympani and ossicula are pushed inward by the pressure of the external atmosphere, and present an obstacle to the exit of the sonorous vibrations which pass into the tympanum through the bones of the head. In the catarrhal affections of the middle ear which are so very common, especially in this section of country, the tuning fork affords a means of establishing a diagnosis in cases where many of the objective symptoms of the disease are wanting. Here, also, the vibrations are heard in the ear which is most seriously affected, or, if otherwise, we have reason to suspect the existence of a secondary affection of the labyrinth, a complication by no means rare in long-continued chronic catarrhal inflammation of the middle ear.

In acute catarrhal inflammation of the middle ear where the vibrations are heard in the normal and not in the affected ear, there is, in all probability, according to Schwartze,[*] in connection with the hyperæmia in the tympanum, a congestion in the labyrinth which leads to serous infiltration of the nervous structure, and temporary suspension of the sensory power of the acusticus. This opinion is suggested by the gradual return of the perception with the diminution of the primary trouble.

Where there is perforation of the membrana tympani, we should naturally suppose that the vibrations would be less clearly perceptible, the opening allowing the sound-waves to pass out of the tympanum. That this is not always the case is due probably to the fact that the laxity of the membrana tympani diminishing the mobility of the ossicula, the vibrations do not pass outward so readily from the labyrinth, and, furthermore, the air in the meatus communicating with that in the tympanum and mastoid cells sustains to a greater degree the resonance of the vibrations communicated through the bones of the head.[*]

It is in cases where the most careful objective examination together with a due consideration of the history of the affection give no clue to the cause of the disturbance in hearing, that the tuning fork is especially valuable; as in a case where the ticking of a watch and the voice are heard at a distance but little below the normal standard, and there is to all appearance nothing abnormal in the external or middle ear, the use of the tuning fork may reveal the existence of a primary affection of the labyrinth or of the auditory nerve.

In those anomalous and rare cases of sudden deafness occurring during pregnancy and in child bed, or where the loss of hearing dates from a sudden mental shock and in the examination of deaf mutes, the membrana tympani and tympanum showing no signs of disease, the tuning fork may enable us to diagnosticate the seat and prognosticate the course and duration of the affection.

Politzer has noticed in cases of sudden deafness on one side, accompanied by subjective noises and unsteadiness in walking, where the portions of the ear open to examination are, to all appearance, perfectly normal, and there is no affection of any of the adjacent motor or sensory nerves, that the tuning fork is heard only on the unaffected side. This train of symptoms is probably due to the sudden occurrence of exudation or extravasation in the labyrynth.[†]

The tuning fork used by Politzer in his experiments[‡] and in his practice, corresponds to the second C in the base, vibrating 512 times in the second. On striking it, we notice particularly two distinct tones—one the ground tone or dominant, the other the upper tone or musical fifth; either one or the other predominates, according to the density of the substance against which the tuning fork is struck.

In employing it for diagnosis, the predominance of the upper tone is often very confusing to the patient and the cause of error.

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[*] Paracentese des Trommelfells. Archiv. für Ohrenheilkunde, bd. ii.

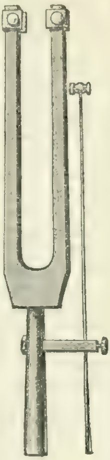
[*] Compare Politzer's monograph, "Neue Untersuchungen über die Anwendung von Stimmgabeln zu diagnostichen Zwecken," &c., Wien, 1868, to which I am indebted for a portion of the preceding observations.—Wiener Med. Wochenschrift, 1868.

[†] Politzer, l. c., p. 13.

[‡] Schall-leitung und Schallfortpflanzung, Archiv. 1864.

In order to get the pure dominant it is only necessary to affix a pair of metal clamps to the ends of the branches; this is done by means of small screws. If the tuning fork is now struck even with a hard substance, only the dominant is perceptible.[*]

The value of the tuning fork in testing the perception of different musical tones has lately been much increased by the discovery that, by fixing the clamps at different points upon the branches, it is possible to obtain all the tones and semitones up to an octave above the musical fourth of the dominant tone of the tuning fork.[†]



The means usually employed for testing the degree of hearing is to determine the distance at which certain sounds are perceptible. These sounds may be divided into two classes, as before mentioned—1, simple sounds; 2, musical tones. Under the former we include the ticking of a watch or of a metronome, and under the latter the striking of the repeater, notes of musical instruments and the human voice, comprising the common tests. To accurately determine the degree of hearing power, it is necessary to employ at least one of the tests belonging to each of the two classes of sounds, if not all of those above enumerated.

The ticking of the watch affords a sound recurring at regular intervals and of a fixed degree of force, but in testing by musical tones a difficulty presents itself in that we have no certain means of regulating their intensity. The human voice is subject to constant variations in power and quality beyond our control, and in such musical instruments as at all answer the purpose the intensity of tone is either of a fixed standard, or dependent upon the uniformity of the force employed in its production, a force which it is needless to say is variable.

Itard[‡] used a bell which was struck by a pendulum, the force of the blow being determined by the space through which the pendulum passed before striking; in this way the difficulty as to control of the intensity of the sound was overcome, but the tone remained the same. Following this idea, I caused to be constructed the tuning fork as represented in the accompanying wood-cut (one-third size), that is, the common instrument with the clamps as used by Dr. Politzer, but with the addition of a hammer, the head of steel, one face being covered with soft rubber.[*] The handle of the hammer is a steel spring sliding in a bar affixed to the stem of the fork, and fastened in place by a small set screw. By using either the steel or rubber face of the hammer, either the upper or lower tone will be rendered most prominent. By affixing the clamps as Politzer directs, we obtain the variety of tone, and by the distance to which the hammer is sprung can regulate their intensity. The adjustment is simple and obviates the necessity of employing any other musical instrument.

FORCIBLE INTRUSION OF A LARGE STONE INTO THE ABDOMINAL CAVITY, AND REMOVAL, WITH RECOVERY.

By W. B. Trull, M.D., Boston.

This case will impress many as extraordinary, and to some may seem incredible, but we submit a careful statement of it to the profession without comment, and leave it among the memoranda of surgical history.

J. S., æt. 41, is a native of Castine, Me., fisherman by occupation, recently seaman on schooner Venilla; he is vigorous in appearance, short and stout in habit, of bilious temperament, and of fair mental development. States that he served as a private in the late war, and while on duty received an injury which resulted in what "they called stricture of the urethra." For five years since, he has suffered from occasional attacks of retention of urine, coming on without premonition or apparent cause. By advice of family physician, he was accustomed, while at home, to use a long glass bottle, three inches in diameter (as a lever of the first order, we suppose), pushing it up the rectum, and obtaining, by its pressure upon the bladder, an immediate flow of urine. At sea, S. has substituted a belaying pin for the bottle.

Up to Monday evening, June 13th, S. had not urinated for three days, notwithstanding frequent application of belaying pin. This evening the schooner put in at

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[*] Dr. Schaar, of Vienna, diminishes the intensity of the upper tone by gentle pressure upon the lower portion of the branches.

[†] Politzer, Wiener Med. Presse, April, 1870.

[‡] Traité des Maladies de l'Oreille et de l'Audition, Itard, Paris, 1842, vol. i. p. 402.

[*] Lucæ proposed the use of a hammer faced with some elastic material for striking the tuning fork.

Holmes's Hole. S., with a shipmate (who corroborates the statement), went ashore for something larger in the shape of an instrument. They found a large stone, which measures 5¼ inches in length, 3¼ in breadth and 2¼ in thickness, and weighing 1 lb. 11½ oz. His friend oiled its smooth surface, and then S. sat down upon its "smaller end" and slowly *pushed over it his sphincters.* The coveted relief was at once obtained, but the *bould* [er] (the reader will forgive the *jeu de mot*) intruder could not be grasped, and they returned to the vessel, S. carrying the stone in his rectum until the next evening, without any disagreeable sensation. Wednesday morning, a physician from the town endeavored to dislodge the mass with a pair of *Hingham bucket-bails*, an instrument, doubtless valuable, but which we have not been able to find in the very comprehensive catalogue of surgical instruments upon our table. Perhaps it may be generally known by another name, or temporarily diverted from its ordinary use, as Addison's copper pot was, in an emergency. The attempt, however, to extract was unsuccessful, but S. states that the stone disappeared, and no further efforts at removal were made until the arrival of the Venilla at her wharf in East Boston.

Thursday, P.M., June 15th, the case was seen by Dr. Wm. H. Thorndike. Digital examination showed that the stone was in the abdominal cavity, having ruptured the wall of the intestine near the sigmoid flexure, although the precise locality and extent of rupture could not be ascertained.

Friday, 2, P.M., operation for removal was performed by Dr. Thorndike, assisted by Drs. Foltz and Trull. After etherization, an incision five inches long and five inches to the left of the median line, and parallel with it, was made through the abdominal walls. The intestines were pushed aside and the stone taken out from the left iliac fossa, almost directly beneath the incision. Considerable serous and purulent discharge followed.

The edges of the incision were closely approximated by silk sutures and long strips of adhesive plaster, and the parts were firmly supported by compress and broad, unyielding bandage. Simple unguent dressings were ordered.

Monday, June 27th, ten days after the operation. There has has been no peritoneal inflammation, and no unfavorable symptoms from the first. On the third day after the operation, it was necessary to send the patient to the City Hospital, on account of departure of the vessel.

Discharges from the bowels were at first involuntary; now, they are normally retained. Nervous response is therefore unimpaired. *A priori*, it was supposed that the sphincters were ruptured, but it seems more reasonable to conclude that the frequent distention to which the muscles had been subjected allowed the passage of the boulder without breaking the continuity of the fibres.

The incision is closed in its whole length. Patient may be considered out of danger. He clamors for food, and talks over his case with amusing *insouciance.*

THE RELATION OF HÆMOPTYSIS TO PULMONARY TUBERCULOSIS.

A Clinical Lecture by Prof. Skoda, of Vienna. Translated from the Wiener Med. Presse, March 27, 1870, by Henry Tuck, M.D., Boston.

Within a few years hæmoptysis has had an entirely new significance given to it by Prof. Niemeyer.* He traces back the diseases consequent upon hæmoptysis to the fact that the blood remaining in the bronchi and alveoli after the occurrence of hæmoptysis is the exciting cause of a chronic inflammation, which sets up febrile action and a tendency to phthisis. If this were really the case, the same thing would occur when the hæmoptysis is due to cardiac disease; but after hæmorrhage occurring in cases of cardiac disease we do not find similar results. If a person affected with tubercle has a hæmorrhage, and death follows immediately or soon after, as a rule no collection of blood is found either in the bronchi or alveoli, whereas, on the other hand, if death occurs suddenly in heart disease from hæmorrhage, portions of the lungs are found congested with blood. "Infarctus hæmorrhagicus" is found extremely seldom after hæmoptysis in tuberculous patients, but is found without exception after hæmoptysis due to cardiac disease. Does such an "infarctus" cause chronic inflammation? I have not observed that it does.

Without doubt at any point where blood collects, a slight reaction follows, but the blood only goes through the usual process; it first coagulates, then becomes encysted, forms a so-called "infarct," but never changes to pus. Such an infarctus hæmorrhagicus can exist for months or even years, becoming gradually smaller, and at last disappearing entirely. The blood corpuscles undergo a change by which black pigment is developed, and fatty degeneration follows. The fluid remaining is reabsorbed and the black pigment is permanent, causing, when the infarctus hæmorrhagicus has existed a long time, black spots in the lung tissue. As this condition, consequent upon the escape of blood into the lungs in cases of cardiac disease, harmonizes so little with the theories of Prof. Niemeyer, I am compelled to say that his hypothesis is not correct. I have said that the infarctus hæmorrhagicus in tuberculous patients is very rare, and such cases only should be examined for this as where death has occurred either during the hæmoptysis or soon after. If death follows some time after the hæmoptysis, it might be said that the blood had been so entirely altered by the process of disease, the subsequent chronic inflammation, that it was no longer recognizable; but if death follows immediately, or very soon after the hæmoptysis, in order to prove the existence of the infarctus hæmorrhagicus, a collection of blood must be found. But this is not found. An examination during life after a hæmorrhage shows also that an infarctus is very rare; but if the patient has already developed tubercle, that itself would cause dulness on percussion. If the patient has not, however, as yet developed tubercle and has had a hæmorrhage, the most careful examination almost never detects any dulness, which proves that the escaped blood does not remain in the alveoli. From observations made before death and upon the dead, it is very probable that the hæmoptysis which occurs in cases of tuberculosis, before and after its development, comes chiefly from the mucous membrane of the bronchi, and not from the alveoli.

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* See article on p. 435, Vol. III., New Series, of this Journal.

If the hæmorrhage came from the alveoli, it would be certainly very difficult to decide that the infarctus hæmorrhagicus is so rarely found. But if the hæmorrhage comes from the mucous membrane of the bronchi, it is easy to see that it cannot remain there, but is coughed up. I can only say that in those cases where death occurs during the hæmorrhage, it is very rare not to find blood in the bronchi, and still more rare not to find it in the larynx and trachea, for even then the blood is being forced out and removed by coughing and partial closing of the bronchial tubes.

I cannot assert beyond all doubt that the hæmoptysis is ever the cause of the patient's condition becoming more serious, for it can have such effect only when the hæmorrhage occurs in an already diseased tissue; for instance, when it occurs in a cavity the walls of which are of course made up of diseased tissue, such tissue being more irritated by the blood than healthy tissue would be. It is worthy of remark in this connection, that blood is not a very irritating fluid; for instance, if, as the result of a blow, blood escapes into the subcutaneous cellular tissue, it, as is well known, does not cause any great amount of irritation, but is usually very quickly reabsorbed.

In proof of this easily demonstrated statement, is the action of the blood where hæmorrhage is the result of cardiac disease, in which case it does not excite any reaction in the lungs. On the other hand, it is not fair to assume that the blood of tuberculous patients only can give rise to an irritation, which leads to the further development of the disease.

I attach great importance to the symptom of hæmoptysis, but only because it is a symptom of already existing disease of the lungs, or of disease just starting into development.

There is, as I have repeatedly stated, a useless controversy over the name of this disease. We know very well that the disease which developes as a result of hæmoptysis has a very characteristic course, quite different from any inflammatory process. Certainly, "chronic inflammation" follows a definite course and a very protracted one, but it is as a rule the same destroyer, which I must now, as always before, look upon as tuberculosis, but which by Niemeyer has been given the name of "chronic inflammation." With this opinion I cannot agree. When, as a result of an acute pneumonia, there remain the products of inflammation, we have a chronic pneumonia.

The products of this disease behave very differently from those of that disease to which I give the name of tuberculosis. The former can remain for months and years without giving rise to the destruction of the lungs, but when tuberculosis reaches the stage of infiltration it is but a short time before cavities begin to be formed. There is between these two diseases a most marked difference; but if the dispute is only about their names, I have nothing to say. It is only necessary to give to the prodromata of tuberculosis the name of "chronic inflammation," and connect with it the symptoms which we ascribe to chronic inflammation. But it is a mere delusion, if you expect by using the name "chronic inflammation" to gain anything in point of therapeutics. The fact which experience has taught us still remains, that we must be guided by symptoms. We know well that there is for tuberculosis no specific. If you say there is also for chronic inflammation no specific, then the two diseases are in the end alike.

Again, the hæmoptysis is not the cause of the resulting disease of the lungs; the cause lies elsewhere, and the hæmoptysis is merely a symptom of the processes of disease which are developing into tuberculosis.

There are, it is true, also other causes of hæmoptysis. It may be due to cardiac disease, and may be no indication of approaching disease of the lungs, although the "infarctus hæmorrhagicus" remains.

There are also occasional cases of hæmoptysis where there is neither cardiac disease nor any lung trouble, where the hæmoptysis recurs often during life without any serious disease of the lungs manifesting itself. Such cases are rare, and are due either to the presence of tuberculosis which gives no farther evidence of itself, remaining circumscribed at one point, but active and manifesting itself by hæmorrhage from time to time.

There are still other causes of hæmoptysis, where the hæmorrhage is due entirely to the existence at some point in the lungs of dilated capillary arteries or veins, where there has been a spot of telangectasis.

Again, any metamorphosis of the lung tissue can undoubtedly give rise to attacks of hæmoptysis, which may be repeated from time to time, yet never lead to tuberculosis; and when the hæmorrhage has ceased, the patient is as well as before, except perhaps weakened from the loss of blood, but showing no other symptoms of disease.

Selected Papers.

ON CERTAIN NERVOUS AFFECTIONS OF OLD PERSONS.

Dr. Francis E. Anstie, in the *Journal of Mental Sciences*, April, 1870, calls attention to a class of neuroses which are the cause of much suffering in old persons, though they do not involve any serious catastrophe. The nervous centres slowly become atrophied, the vessels become atheromatous, the true nervous matter is gradually supplanted by connective tissue, contraction of which causes a shrinking of the ganglionic masses. This process is not always uniform in the same portion of the nervous system, but is probably subject to great variation.

"Certainly the clinical history of the group of neuroses which I am about to describe does at least very strongly suggest that they arise respectively from an unusual preponderance and rapidity of the wasting of particular nervous centres. * * *

"1. The first class of senile nervous affections of which I shall speak, includes the various degrees of sleeplessness and restlessness—that is to say, without any corresponding mental affection. * * * * The sleeplessness of the aged commonly takes the form of inability to sleep for more than two, three, or four hours. The majority of the sufferers, so far as I have seen, get fairly well off to sleep, but are tormented by finding themselves broad awake again by three or four o'clock in the morning, even when they had only retired to rest at 11 o'clock, or later. This state of things may be absolutely the only noticeable thing amiss, except, of course, that there is weariness and a certain loss of strength from the inadequate amount of sleep obtained. But frequently there is not only inability to sleep for any long period, but there is active restlessness, a state of muscular fidgets, which has no necessary connection with any mental uneasiness. The patient gets uneasy as nightfall comes on; he will shift his position fifty times in the course of an evening, and when he goes to bed, although he may sleep, it will be a broken slumber, with frequent tossing from side to side. In short, the condition very closely resembles the early stage of chronic alcoholism, a stage when the patient has very likely not even recognized the fact that there is anything seriously amiss. Indeed, both the insomnia and the muscular restlessness of old age are curiously like the analogous conditions produced by chronic alcoholic poisoning, and we can hardly suppose that the resemblance is only on the surface. For, in truth, the pathological changes in the nervous system of the aged are so closely imitated by degeneration of alcoholic origin that we might fairly describe the latter as a premature old age artificially induced. * * * *

"It appears highly probable that both in senile decay and in alcoholic degeneration, the brain alone may be affected, and sleeplessness may be the only result, or the motor tract may be extensively affected with just so much of change as to produce—not tremor exactly—but restlessness. Both in chronic alcoholism, and in mere senility, cases are sometimes, though rarely, observed, in which there is muscular restlessness, and even slight tremor during waking hours, but no particular insomnia at night; in which case we may suppose the motor tract to be affected to the exclusion of the centres of consciousness.

"2. Frequently allied with, but occasionly independent of insomnia and muscular restlessness, is a peculiar state of mental irritability in the aged. I am not now speaking of patients in whom there is mental alienation amounting to senile dementia. Far short of this, there is a phase of mental change in the aged which is sometimes inexpressibly trying to the patient himself, and still more to all those who are brought into contact with him. It may be said to consist in a peculiar perversity, a tendency to offer vexatious and frivolous delay and opposition to everything which is suggested by others, however important the occasion. This is the typical character of the mental state; but in truth it shades off by imperceptible degrees into the form of senile dementia, with occasional or permanent delusions. The patients are nearly always individuals who, in their own person or that of other members of the stock from which they spring, can produce evidence of a markedly neurotic constitution; often such persons belong to families in which there has been a considerable amount of declared insanity. They are just that sort of folk who insist on making perverse and unreasonable alterations in their wills, when these had been settled long before in a just and convenient manner, or who quarrel in their last days upon some frivolous pretext with the friend of a lifetime.

"3. Closely allied with the peculiar mental state just described, though by no means always accompanying it, is a very peculiar modifications of the vitality of the skin. In the first place, the patients to whom I now refer exhibit a very marked increase of susceptibility to certain peripheral impressions; for instance, the mildest stimulant application will, in such subjects, produce a most astonishing and unexpected irritation. * * * *

"I have seen similar occurrences over and over again; and besides this, there is a spontaneous tendency in the skins of old persons, of similar constitutions, to develop phenomena of irritation. I need hardly mention to any reader the frequency and intractability of so-called *prurigo* among the aged. It is true that attempts have been made, in recent years, to show that *prurigo* can nearly always be traced, with proper care, to the presence of animal parasites; but that view of the case is assuredly an exaggeration. I am not prepared to say that the altered vital status of the skin of some of these elderly patients does not render it a more fertile soil for the nourishment of animal parasites; and doubtless the latter, when present, would increase the irritation. But it has happened to me, as no doubt it has to many others, to observe the most intense prurigo in individuals who not only were exquisitely cleanly in their habits, but in whom the closest inspection and microscopic investigation has failed to detect the least trace of the presence of parasites.

"One such case of an old lady of seventy can never be forgotton by me; not only because of the utter intractability of the disease under any such remedies as were then at my command, but because of the remarkable clinical history. For a long time before the skin irritation showed itself in the least, there had been a mental perversity, strictly answering to the type which I have described above, and threatening the peace and comfort of every one who was connected with the patient. At last there appeared a universal pruriginous irritability of the skin, slight at first, but soon increasing to a degree which made life a constant torture; no external cause whatever could be assigned, and none of the numerous remedies, both local and constitutional, which were tried, effected the smallest good. Yet I do not hesitate to say that by the intelligent use of such remedies on such a principle as will be presently described, cases even of this gravity may be robbed of all their severity. A most interesting phenomenon in the case of the old lady just mentioned was, that the greater the amount of pruriginous irritation present, the more completely always was the power of *discriminative* skin-sensation abolished.

"4. A fourth group of neurotic maladies which prey upon large numbers of the aged, and make their life miserable, includes various spasmodic, or half spasmodic and half paralytic affections of the stomach, or intestines, or both. If one wished to see an extreme instance of this kind of affection, one need only watch some aged pauper who has been recently admitted to a workhouse, and has incautiously eaten a pannikin of workhouse pea-soup; but this is hardly a fair example, the iritating substance being of such uncommon virulence. The cramping abdominal pain and the bellowing flatulence, however, are only a slight exaggeration of what happens to hundreds of aged persons whenever they take food, or at any rate whenever they take anything which inflicts the slightest extra peristaltic labor on the stomach or bowels. So far as one can judge, the local condition seems nearly always to be a compound of spasm and paralysis; individual groups of muscular fibres being strongly contracted, while others are so completely paralyzed as to allow any amount of distention by gas. Sometimes there seems to be complete palsy of the muscular fibres of the stomach, or of the colon, which can be mapped out by the exaggerated tympanitis of their percussion sound, while the abdominal muscles, on the other hand, are in a decidedly spasmodic condition, as if from some reflex effect. And it is really miserable to reflect on the fact that such patients, by scores, are treated as if their malady were of the nature of a catarrhal dyspepsia, and on that supposition are drenched with medicines which simply aggravate the mischief indefinitely. Indeed, it is the consideration of this kind of senile maladies which has chiefly induced me to bring forward the subject of the minor neuroses of old age; since the diagnosis is both important and also extremely interesting. Such patients will hardly ever be found to suffer only from the abdominal affection. Nearly always it will be discovered that they have also the true senile insomnia, or muscular restlessness, and sometimes positive tremor.

"A most interesting point of comparison lies between the flatulence and abdominal spasm of senility, and the somewhat similar condition which is found in so many hypochondriacs of all ages, and which occasioned their malady to be anciently called the 'vapors.' Nothing can be more astonishing to the novice in 'nervous' practice than his first interview with a flatulent hypochondriac, especially if he happens to witness one of the attacks from its commencement; the sudden conversion of the patient's whole interior into a mere cave of Æolus, is perfectly startling; yet the same thing, in only slightly less intensity, may be studied to any extent among the aged; but in the latter case it is taken as a matter of course, although the suffering and discomfort are often greater, and this without the alleviation which your genuine hypochondriac always derives from the noisy evidences of his misery. The same remarks may apply to the similarity between senile cramp and flatulence, and the symptoms displayed by many hysterical women; but the parallel with hypochondriasis is much more instructive, because there can be no pretence in an immense number of cases of the latter disease for supposing that the phenomena result from peripheral irritation, a supposition which is always possible in the case of hysteria.

"The above is by no means a complete list of the minor, yet very inconvenient, neurotic affections to which the aged are liable; but they are the most frequent of them; and they form together a group which is well deserving of study, both in a biological, and what is of more consequence to my present purpose, in a theoretical point of view. * * * *

"The more carefully we reflect on the conditions of the *duration of life*, the more we shall be inclined to regard the nervous system as that portion of the organism of the higher animals which is at once the most exquisitely perfected and the most fragile. * * * * Its structure is necessarily complex, and its requirements for perfect vitality and efficiency are high."

It attains its maturity slowly, and for the healthy maintenance of its functions requires a free supply of healthy blood. But the apparatus of circulation, especially the peripheral arteries and arterioles, is precisely that portion of the organism which enters first upon the degenerative changes, which end finally in death. A large majority of so-called "natural deaths" are caused by some break-down of the nervous centres.

"It is only a step from this principle to the other, and not less important one, that the last portion of life is likely to be signalized by local and partial failures of the nervous centres, which might easily be very capricious in the order of their succession, since it is known that the pathological changes of the bloodvessels, which distinguish the period of commencing bodily decay, are particularly irregular in the order of their local development. And there is much evidence to convince us that the commencement of definite organic lesions of the brain and spinal cord is preceded, and that its earlier stages are accompanied by curious local disorders of the circulation, which produce temporary disturbance of function that are sometimes alarmingly severe. I need not remind any one who has had much practice in nervous disorders of the attacks of vertigo which so often precede, by a considerable period, the occurrence of actual hemiplegia in genuine senile ramollissement; but I may call attention to the fact that, powerless though we are to prevent the final catastrophe, we can greatly relieve the vertiginous sensations which foreshadow it; and we can do this best by the use of remedies which it can hardly be doubted act by regulating the cerebral circulation. And this brings me to the practical part of my paper—the question of treatment—in which I shall endeavor to show that the neurotic affections of old age, though so various in their seat and manifestations as to include insomnia and mental modifications at one end of the scale, and stomach cramps at the other, are all to be treated upon the same principle, viz., that of modifying the circulation of the particular nervous centre which may be supposed at fault in the individual case.

"And in the first place, with regard to the insomnia, which is not only very common in old age, but (especially when combined with muscular restlessness) is very distressing, and, not unfrequently, leads to a most undesirable modification of the patient's temper, and even of his character.

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"The bromide of potassium, which had given such excellent results as a hypnotic and general tranquillizer of the nervous system, both in my own hands and those of others, unexpectedly failed to give anything like the same amount of relief in the insomnia and nervous inquietude of the aged. This led to a large number of comparative trials of drugs, both in cases of senile decay, pure and simple, and the insomnia of advanced stages of chronic alcoholism which had gone on slowly for a long time. The fact then came out clearly, as it seemed to me, that for the relief of either of these conditions, either sulphuric ether or pyroxylic spirit are greatly superior to the bromide. The remedies were given internally, however; and I had not adopted Sir F. Pollock's plan of *inhalation* from an ordinary bottle through one nostril, which there is much reason to believe is the best way of taking ether for hypnotic and generally calmative purposes. My own impression is rather strongly in favor of the idea that the failure of the bromide to produce sleep in senile insomnia is owing to its too great *anæmiating* effect; for although the brain needs to be anæmic to a certain degree, in order that sleep may take place, it is equally the fact that *excessive* anæmia entirely prevents sleep. On the other hand, I must suppose that small doses of ether and similar agents produce sleep by a gentle stimulation which removes spasm of vessels and *territorial irregularities* of circulation in the brain; and it is an interesting thing to inquire whether this be a direct effect on the vaso-motor fibres in the brain itself, or a reflex effect starting from the action of the ether upon the terminal branches of the vagus in the lungs. In favor of the latter idea is the fact that the vagus is the great inhibitor of vaso-motor action; and it would be further supported if the plan of minute *inhalations* were ultimately proved to be more efficacious than the use of small stomach doses. But even when taken by the stomach, ether must very quickly present itself to the terminals of the vagus in the lungs, as it circulates in the pulmonic blood.

It is doubtful, however, whether the new remedy, chloral, may not supersede ether for the purpose of inducing natural sleep and general nervous tranquillity in aged persons. I am still engaged in a research on the actions of this drug, which I hope shortly to publish elsewhere; but I may state a few facts already made out. In the first place, hydrate of chloral, given in anything like moderate doses, appears to be the most purely tranquillizing agent in the whole range of the pharmacopœia; it is not till highly poisonous doses are reached that any symptom of *physiological disturbance* is produced. In this respect it markedly differs from the action of every other hypnotic with which I am acquainted. Secondly, a number of sphygmographic observations which I have had made upon myself seem to prove that is excites a steady toning influence upon the arterial web, which must be altogether opposed to the existence of local spasms and territorial irregularities of circulation in the brain. In short, it appears as if it must produce just the necessary amount of control over the cerebral arterial circulation, to keep it at a uniformly rather low level, without any excessive anæmia.

"The effect of remedies which really reach and subdue the sleeplessness and muscular inquietude of aged persons extends much further than the mere removal of these symptoms. In cases where *opium* has agreed well (which is not always the case), I have seen a revolution take place in the whole character and mental habits of the patients, which must have been seen to be believed; and I have considerable confidence that extended experience will show that both ether (in minute inhalation) and hydrate of chloral are capable of producing similar effects, while they will probably be much more widely applicable than opium. I have already entered a protest elsewhere against the senseless bigotry, as it appears to me, of withholding the systematic use of calmatives from the aged, under the influence of unreasoning dislike of what they call 'a habit of indulgence.' * * * * *

"It is of incalculable advantage to their chances of a [illegible] and peaceful old age that their nervous systems should be kept in a state of tranquillity, and the secret of this, we can hardly doubt, is to prevent local inequalities of circulation in the brain and spinal cord.

"We must next discuss the treatment of the very common and troublesome spasms of the stomach to which the aged are liable. Up to the last minute almost, we have been prosecuting fresh inquiries, with a new remedy. These stomach cramps in the aged are, unfortunately, often treated as dyspepsias depending on derangement of the digestive secretions, and a variety of more or less depressing remedies, such as alkalies, hydrocyanic acid, and a great many more, besides cartloads of innocuous, but useless, bismuth, are poured down the throats of unfortunate old ladies and gentlemen who could have been relieved of all their miseries in a few moments. Sir F. Pollock has recently described in the *Practitioner* how effectually the inhalation of a few whiffs of ether relieved this kind of affection in himself, besides inducing general tranquillity and rendering sleep possible. There can be no doubt that the observation is a correct one ; and I have since verified it on more than one occasion.

"The last thing which I have to notice is the treatment of the curious irritable conditions of the *skin* which are often found in the aged. So far as I know, the treatment of this sort of affection is very often an elaborate farce. * * *

"But if we can once accustom our minds to the idea that the phenomena may be due to the mere progress of degenerate changes in the central sensory tract of the nervous system, I believe that we shall discover a starting-point for rational treatment. The hydrate of chloral has yielded excellent results in my own experience in two cases of great irritability of the skin in aged persons.

"The mere administration of a single half-drachm dose at bed-time for several successive nights, with the effect of procuring calm and tranquil sleep, produced a very noticeable diminution of the skin irritation. I then resumed the use of arsenic (Fowler's solution, five minims three times a day), which, singly, had before proved ineffective, and the irritation completely subsided in about five and seven weeks respectively."

Reports of Medical Societies.

VERMONT MEDICAL SOCIETY.

The Vermont Medical Society held its semi-annual session at Burlington on the 7th and 8th of June ; Dr. Henry Janes, of Waterbury, President, in the chair, and Dr. L. C. Butler, of Essex, Secretary.

The credentials of Dr. B. F. Sherman and Dr. Shumway, as delegates from the Medical Society of New York, and of Dr. Albert Smith from the New Hampshire Medical Society, were presented, and the gentlemen were invited by the President to participate in the proceedings of the Society.

Dr. L. C. Butler read a paper on "New Remedial Agents," and commended the two remedies recently introduced to the profession, viz. chloral hydrat and iodoform.

Dr. O. F. Fassett read a paper on "Anæsthetics in Midwifery." The subject was freely discussed by Drs. Smith, Hyde, Putnam, Crosby, Fassett, Sherman, Upham and Branch. The general expression was in favor of chloroform as the anæsthetic to be used.

Dr. C. P. Frost read a paper on the "Uses and Abuses of Opium," which gave rise to a general discussion, in which Drs. Crosby, Smith, Putnam and Sherman participated.

Dr. John Branch read an obituary notice of Dr. Seth R. Day, of St. Albans.

During the evening session, in the absence of Dr. Abraham Harding the Vice President, Dr. C. P. Frost read a paper on the "Pathology of Fever," prepared by Dr. E. E. Phelps, of Windsor.

The President presented the credentials of Dr. C. F. Kingsbury, delegate from the New Hampshire Medical Society, who was invited to participate in the deliberations of this Society.

On the second day of the session, President Janes read a paper on "Gun-shot Fractures," giving results of his own observations.

Dr. G. B. Bullard, of St. Johnsbury, read a paper on the "Thermometer in Disease," recording his observations on the use of this instrument in the progress of scarlatina, measles, typhoid fever and tuberculosis. The discussion on this paper was participated in by Drs. Crosby, Kingsbury, Bullard, Janes, Putnam and others.

Dr. Crosby presented a photograph of a pair of Siamese twins for the examination of the Society, and gave a history of the case. In connection with the subject he gave minute details of the operations for vesico-vaginal fistula.

Dr. L. C. Butler read a paper on "Statistics of Consumption in Vermont," particularly with reference to its geographical distribution among the counties of the State in proportion to population. The subject of the paper was discussed by Dr. Shumway, of New York, and Dr. Janes, urging the continuance of the line of investigation indicated in Dr. Butler's paper.

Dr. Hutchinson presented an obituary notice of Dr. S. S. Butler, of East Berkshire.

Drs. C. P. Thayer and H. H. Langdon, of Burlington, were elected members of the Society.

Medical and Surgical Journal.

Boston: Thursday, July 7, 1870.

SALUTATORY.

With the opening of a new month, the Boston Medical and Surgical Journal enters on a new volume and the Editorial reins fall into other hands. Dr. Luther Parks retires from the position which he has, once and again, so ably and gracefully filled, and joins the company of past Editors—an honored band who carry back the history of the Journal for more than forty years, to the days of the elder Warren, of Channing and Ware.

It is the hope of the present incumbent of the Editorial chair to maintain the Journal where its previous conductors have striven to place it—on the one hand as the exponent of medical science for the New England States; on the other as the messenger, through judiciously selected professional literature, of all that is new and valuable in medicine, between the outside world and our own number.

With the necessity of accomplishing these two ends in a satisfactory manner the Editor's position is by no means a sinecure. In his intercourse with his brethren, it is his duty to watch well the public pulse; to study thoroughly the body corporate of the profession, both in health and, as it too often manifests itself, in disease; and, with all the wisdom he can control, so to direct the medical mind as best to serve the profession. With reference to the scientific control of the Journal, he is called upon to lay before his readers the best medical knowledge which the present day affords, and in this way to place in the hands of suffering humanity the most satisfactory means for its relief. In his acceptance and selection of material he must pursue such an advanced and enlightened course—keeping up with the prevailing sentiment, yet leading it—as to direct the public mind into the right paths. An able journal should *make* public opinion, not alone follow it.

In the clerical and manual part of his work the Editor must depend very much on his professional associates. In the various branches of our profession are men whose minds have been turned in certain directions, to precise points or subjects of investigation—specialists, in fact, for the time being; and, as in the German schools of the present day each man takes his square inch of the body's surface and pores for a life time over the integumentary, muscular, circulatory and nervous system of that limited region until he knows it thoroughly, so we have here, though in a different way, specialists whose minds are filled with rich thought on subjects which should not be kept from the profession. We have older men whose advanced years give season for systematic thought and a due application of those useful suggestions which their lifework has given them. We have active professional men, no one of whom should be so busy that he cannot occasionally select from his case-book some really valuable contribution to professional experience. We have young men, just home from the schools of the Old World, who can give us valuable suggestions from the workers of Germany, France and England. We have societies and hospitals which owe their very existence and maintenance to the profession, and which should not grudge the profession the advantage which their rich experience yields them.

Having, then, these materials before us, it becomes our duty so to use the thoughts and the facts of every one's experience, fugitive as they are in their nature, that they may serve as the tools of every member of the profession. With this assistance, the Editor can place in the hands of every reader a useful and valuable JOURNAL; without it his hands are tied, and *he* must bear the blame which should, to a large degree, rest on the profession itself.

This, then, is the position assumed by the present Editor as the characteristics of a good medical journal. An advanced and enlightened estimate of the wants of the medical profession, so far progressive as to seek and grasp the new and the good from whatever reputable source; so far conservative as to shrink from a too speedy recognition of possible fallacies; a spirit of independence, without any adherence to factions, schools or individuals; which shall freely admit to the JOURNAL worthy articles, useful information or fair discussions on any proper subjects; but which shall, as unreservedly, reject personal allusions and all matter which may seem unfitted for our columns.

With these assurances of a desire to conduct the JOURNAL in a manner which shall be satisfactory to its patrons, the Editor enters on his duties, only reminding his professional brethren that their coöperation is necessary for his success.

It gives him pleasure to say that he has again secured to the JOURNAL the services of Dr. BEACH as Assistant Editor, a gentleman whose qualifications well fit him to lighten the duties of the Senior Editor.

HYPODERMIC INJECTION OF ERGOTINE IN THE TREATMENT OF ANEURISMS. By Prof. E. ALBANSEE.—During the past year we have called the attention of our readers to the cases on this subject published by Langenbeck.* His new method of treatment has been employed in the hospital at Palermo, and the success attained warrants renewed experiment.

R. A., aged 38 years, entered the hospital April 27 for an aneurismal tumor of the arteria innominata of six months' standing. The tumor was of the size of a mandarin orange; it occupied the sternal fossette, and rose about four centimetres above the clavicle. It pulsated, and the beats were isochronous with those of the radial artery; the circulation of the right arm was obstructed; there was œdema; and the hands and fingers were livid. The patient was unable to lie down, and complained of pains in the stomach. She stated that she had frequently fainted, and had, at various times, been in danger of dying. The movements of the right arm were performed with difficulty. At the apex of the right lung there was insufficient respiration; there was obscurity in the sound and transmission of the heart-sounds.

On the 29th of April, the temperature of the right axilla was 37·6° cent.; the pulse at the right wrist, 72: at the left axilla, temperature 37°; pulsations 70.

The 1st of May, 18 centigrammes of a solution of ergotine were injected, by Pravaz's syringe, into the subcutaneous tissue and the aneurismal sac. The formula of the solution used was ergotine (de Bonjeau), 2·50 gr.; glycerine and alcohol, āā 7·50 gr. The 2d of May, a second injection of 20 grammes of the solution was employed. Immediately afterward, the patient experienced severe dyspnœa, with lividity, and coldness of the extremities; the pulse became imperceptible at the wrist. These symptoms yielded to hot fomentations, dry cups to the cardiac region, and two venesections, which drew in all 140 grammes of blood. The 4th of May, a third injection was performed of 30 centigrammes of the solution. After this injection the pulsations in the tumor could only be felt with difficulty, and the the 5th of May the patient was able to move the head and arm with ease, and the respiration became free. From the 6th to the 8th, 1·10 gr. of the sol. of ergotine were injected on four occasions.

The local relief immediately became very perceptible, and the tumor diminished in volume. At the point of puncture a slight induration was observed in the subcutaneous tissues. The following solution was then substituted for the alcoholic compound :—Ergotine, 2·50 gr. ; distilled water and glycerine, āā 7·50 gr. ; alcohol, 10 gtt. On the 9th of May, there was again a threatening syncope, which yielded to stimulants. From the 10th to the 30th of May, three grammes of the watery solution were injected in seven times.

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* See this Journal, vol. iii. p. 380.

The condition of the patient improved from day to day ; she could soon raise herself and speak freely ; the œdema of the arm and hand disappeared ; she had a good appetite and took tonics.

On the 1st of June all treatment was omitted, and the patient left the hospital.—*Gazetta Clinica di Palermo*, No. 1, 1870.

AMERICAN ASSOCIATION OF MEDICAL EDITORS.

Since writing our editorial, we have had placed in our hands the report of the American Association of Medical Editors, including the address of Dr. Davis, of Chicago, the President for the past year—an address containing so much which is consonant with our own views that we feel inclined to copy portions of it for the benefit of our readers.

After giving, somewhat briefly, the history of medical journalism in America, from the issue of *The Medical Repository* in the city of New York, in 1797, to the present day—a history which includes a list of one hundred and twenty medical periodicals, living and extinct—he continues :

"It is thus seen, that notwithstanding the numerous abortive attempts at medical journalism which has characterized our past history, we still have an abundant medical periodical literature, the publication of which is well distributed to the various parts of our country. In regard to the present character of our medical periodicals, I am constrained to speak with some hesitancy. Twenty-two years of active editorial labor in connection with the medical press, has certainly afforded me opportunity to become familiar with the subject.

I cannot agree with those who, after excepting one or two favorite publications, unsparingly denounce all the rest as mere trash, or stupid copyists from one another. Neither can I join with those, at home or abroad, who indulge in unrestricted depreciative comparison of our periodicals with those of other countries.

"And yet there are faults too obvious to be overlooked, and which this association should make earnest efforts to correct. Nearly all our periodicals are modelled on the same plan. Each contains a department for original articles, and clinical and society reports ; another for selections from other periodicals ; another for notices of new publications, and another for editorial and miscellaneous matter.

"It is true that most of our periodicals admit into the first of these departments articles defective in style, and impoverished in ideas ; cases so imperfectly reported as to be of no value ; and reports from hospitals and societies, equally imperfect and valueless, except to fill space, and give publicity to the names of the parties concerned."

"The occasional copying of an essay or article of more than ordinary value, from one journal to another, always giving due credit for its source, and thereby giving it a wider circulation, is doubtless not only justifiable, but beneficial to the author and the whole profession. But as a general rule, the editors of medical journals should treat the original matter in their contemporaries in the same manner as new publications. They should make such careful and well-considered reviews of the important papers as would give their readers a correct idea of their nature and value, thereby enabling them to judge whether the original was worth their purchase or not."

"But in our estimation, no part of our medical periodicals is more deficient than that which is expected to be filled by editorial matter proper." "Only a very few out of the whole number occupy what editorial space they have with candid articles, calculated to enlighten their readers on the many important questions connected with the sanitary, social, ethical, and educational interests of the profession. And I think it may be said with truth, that in none of our periodicals do these topics receive the editorial attention that their importance demands."

"I will hasten to a brief consideration of the question, how can medical journalism in our country be improved ? To answer this question satisfactorily, involves a correct appreciation of the causes of its past and present instability and imperfection. These have been very generally attributed to the excessive number published, and the consequent inadequate pecuniary return for the labor required. And the remark is often made, that if our medical periodicals were restricted in number to such as are issued from a few of the great centres of population, where their editors have access to the abundant materials afforded by hospitals and medical societies, they would command a sufficient number of readers and supporters to give them permanence and excellence. It is very doubtful whether this view can be verified, either by observed facts, or the application of well established mental laws.

"The publication of these periodicals, in the different and distinct sections of our country, is of great advantage in developing a knowledge of the climate, topography, and diseases of their respective regions, as well as stimulating a taste for reading and writing in the local profession around them. Our experience and observations have satisfied us that most of the faults connected with American medical journalism are traceable to two sources, namely, the defective education of the profession, and the imperfect arrangements of those who undertake the editorial supervision and publication of the respective journals.

"It is perfectly well known that a large part of those who enter upon the practice of medicine, under our system of medical education, are wholly destitute of that general education and mental discipline which is essential to the formation of a taste for reading and writing. Without an adequate knowledge of the elementary branches of common education, and without the slightest acquaintance with any of the sciences, they have performed the task of reading the text-books in medicine, much as the apprentice performs his task in a mechanic's shop."

"And if here and there one of this class is induced to patronize a journal, or furnish a contribution, the letter is written in such style, that the editor must either throw it into his basket of waste paper, so far re-write it that the author would not recognize it as his, or let it appear in such condition as to disgrace the pages of his journal. It is directly to this imperfect education of the profession, that medical journalism owes both its limited patronage and the literary imperfections which have so frequently subjected it to disparaging criticism. The physician whose mind has been early disciplined by study, and fed with the bread of science, will be just as much lost without one or more medical periodicals, as is the clergyman without his church paper, or the politician without his party organ.

"The second efficient cause of instability in medical journals was stated to be the imperfect arrangements of those who undertake their editorial supervision and publication." "If the foregoing views are correct, in regard to the causes of the insufficient patronage, instability and imperfections of medical periodicals in this country, the remedies are obvious. Nothing short of a higher standard of education, both preliminary and medical, on the part of those who enter the profession, and a more correct appreciation of the arrangements and qualifications required for maintaining a creditable medical journal, will remedy the evils. The first would multiply the number of readers and ensure the proper merit in their contributions, while the second would speedily arrest the tendency to make inconsiderate efforts to establish new journals."

"You who control the medical press hold in your hands the main avenues through which the great mass of the professional mind can be reached and influenced. You have the means and the power, if you choose to use them, to mould the public sentiment of the profession and concentrate it on the accomplishment of any desirable object, with an irresistible force.

"Dr. Theophilus Parvin, at whose suggestion this association was formed last year, stated, as one of the reasons for such action, that the editors of the medical periodical press were not exerting that positive influence on the medical public which belonged to their position, simply because a large part of them maintained a studied silence on all the important topics to which we have alluded, while others break their silence only by an occasional facetious remark. Is it not time, gentlemen, that this apathy, this studied silence, on topics of so much importance, was abandoned? Is its continuance compatible with a just appreciation of the importance of our position and of our individual responsibility? If we have assumed positions that give us the power to wield an important influence for good, are we not justly responsible for the enlightened and efficient exercise of that power? These are questions that must be answered to our own consciences."

"Let us take concerted action, by outspoken, candid, full discussion of the vital questions involved in the elevation of the standard of medical education, until the great evils universally acknowledged to exist are removed, and the profession in our country rests on an educational basis commensurate with the extent of its science and the nobleness of its art. But in all our work, let us remember that personalities are not arguments; that to pull down a rival is not equivalent to building oneself up; and that it takes far less time to inflict a wound than to heal it. Finally, my brethren of the editorial fraternity, let us justly appreciate both the influence and the responsibility which attach to the position we occupy, and with honest, earnest purpose wield the one and respond to the other, in such a manner as will advance the true interests of our profession, because, in so doing, we shall most efficiently promote the interests of humanity."

Dangers from Insane Persons being at Large.—The senseless abuse of physicians by magazine and newspaper writers, for their management of institutions for the insane, and their agency in placing insane persons in such institutions, is bringing forth its legitimate fruit. Physicians are loth to have anything to do with cases of insanity; and the friends of the insane fear the abuse and notoriety to which they may subject themselves, if they take steps to place their afflicted ones under the most favorable circumstances for recovery from their malady, or seek to protect them or the community from possible acts of violence to themselves or others.

Scarcely a day passes that does not bring to our notice cases where death has been the result of this neglect. Several are to be found in the few papers that come under our notice, at the date of this writing.

In Ohio a man has just been acquitted of murder on the ground of insanity. He killed a Roman Catholic priest. *Query*—Was he turned loose to murder another priest, or committed to a hospital for treatment? If the latter, how long before a habeas corpus or the abuse of the newspapers will "liberate" him?

In Indiana, a woman had been insane for two years, and had attempted suicide. She had "lucid intervals." It was hardly thought that she would attempt the life of any of her family, yet in the momentary absence of her husband—who seemed to live in fear of her doing some dreadful thing, and who kept a close watch over her—she, while dressing her babe nine months old, suddenly opened the stove door, and deliberately placed the poor infant on the burning coals! The father instantly rushed in and took it out, but it only survived three hours. Will no "lettre de cachet" place her where she ought long ago to have been? But no—she has "lucid intervals," and what physician will dare "restrain her of her liberty?" It is a question for a jury of *civilians* to decide, while medical witnesses are insulted and abused by the court and the bar!

One more case and we have done with this sad record of a day—*all taken from one paper!* In Richmond, Virginia, lived an old woman, alone with an insane, or idiotic brother. She appears to have been taken ill, and he had not sense enough to do anything for her, or to notify any one of her illness. In this condition, she suffered and died, without any one to do aught for her. When discovered, she had been dead, it was supposed, for three weeks, and the cows and chickens on the premises were found starved to death. The poor idiotic brother, who ought to have been in a hospital, said that his sister had been asleep for a long time, and that she was sick before she went to sleep! He had kept himself alive apparently on some coffee grains and water. For sixteen years they had lived alone. Had he been in a hospital, she would undoubtedly have been differently circumstanced, and not died in this sad way. —*Medical and Surgical Reporter*.

Pleasant Item for Smokers.—A correspondent in New York writes us of a young man who has been for three years the victim of constitutional syphilis of aggravated character. His lips and tongue are covered with mucous patches; a most offensive odor emanates from his whole body, especially from his breath, and a caries seems about attacking the bones of the nose, &c.

He is a cigar-maker by trade, and he has daily been making cigars since he was first attacked. No cigar is made without moistening the leaf with saliva, as every one knows who has ever seen a cigar made. Is it not more than probable that many who have smoked cigars of his make, and others similarly situated, have imbibed syphilitic poison, and then wondered how they got the disease?—*Ibid.*

A new dispensary has been recently organized in New York, for the treatment of "indigent persons afflicted with cancers, tumors, and diseases of a kindred nature." Attending surgeon, Dr. J. A. Hagy; consulting surgeons, Drs. T. Addis Emmet and J. C. Nott.

Medical Miscellany.

Anonymous Contributions.—We must remind our correspondents that we cannot publish articles which come to us anonymously. The Editor at least must be entrusted with the name of the author, otherwise the communication must be excluded from our columns. Recent experience compels us also once more to request our friends to use but one side of their writing paper, and to spare the patience of both Editor and compositor by writing plainly and distinctly.

Death of Sir James Clark.—The telegraphic cable brings us the news of the death of Sir James Clark at the age of 82. He has been an honorary member of the Massachusetts Medical Society since 1833.

Lady Simpson, widow of Sir James Y. Simpson, died at Killin, Perthshire, Scotland, on the 17th ult.

Recrystallized Chloral Hydrate.—Messrs. A. and M. Zimmermann, London, write as follows to the Editor of the *Medical Times and Gazette*:—

"Many complaints of imperfect and unreliable effects of chloral hydrate having been noticed in its therapeutical application, a natural doubt has been cast upon the very numerous preparations which, tempted by profitable prices, have for some time made their appearance in the chemical market. Dr. Liebreich has succeeded in obtaining a form of chloral hydrate in transparent crystals, somewhat of the average size of fine Epsom salt crystals; and in introducing this article into the English market, we need not draw the attention of the scientific chemist to the self-evidence of its chemical superiority and purity, but simply wish to observe to the medical profession that this is the only reliable form for the regulation of the exact dose. The difference in price is comparatively nothing, not exceeding at most 3d. per ounce."

The Cause of Left-handedness.—We find the following item in the *Independent*:—It would be worth while for our anatomists to record their observations on this point. "The cause of right and left-handedness is generally anatomical. Prof. Hyrtl says that in two cases out of 100 the left subclavian artery has its origin before the right, and in these cases complete left-handedness exists. The blood is ordinarily sent with more force, according to Prof. Hyrtl, through the right than through the left subclavian artery, thus nourishing the muscles of the right arm more fully. In the rare cases where the internal organs are transposed, the heart being on the right side, there is also left-handedness."—*Med. & Surg. Reporter.*

Another Death from Bichloride of Methylene.—While a healthy-looking man, æt. 40, was placed on the operating table of Guy's Hospital, London, for the purpose of having iridectomy performed in each eye, one drachm (measured) of methylene was administered. The operations on both eyes were completed, and the patient left on the couch, while one of the assistants noted down the nature of the operation. About three minutes had elapsed, when it was noticed that the respiration was shallow and catching. There were a few gasping inspirations, then all ceased. For about ten minutes the galvanic current, and for about an hour artificial respiration, were employed without success.—*British Medical Journal.*

A New Test for Albumen.—Dr. C. Meymott Tidy, Joint-Lecturer on Chemistry at the London Hospital, has noted that a mixture of equal volumes of acetic and carbolic acids is a far more delicate test for the presence of albumen, than any other method that has been proposed. In using this test with urine, it is necessary to shake the test-tube, as some opacity is produced by the mere admixture of fluid, which, however, disappears on agitation.—*N. Y. Med. Record.*

Rokitansky.—The eminent pathologist, Rokitansky, has been elected President of the Imperial Academy of Science at Vienna.—*Ibid.*

The printing of the Title-page and Index to Vol. V. of the Journal has been unavoidably delayed, so that we are prevented from sending them out in this number, as promised last week.

To Correspondents.—Communications accepted:—Pseudo-meningitis as a Prodroma of Acute Disease—Sulphate of Quinine in the Treatment of Spontaneous Erysipelas of the Face—Reports of Committees: How to be disposed of—On Temperature in the so-called Milk Fever.

Died,—At Taunton, July 5th, Henry B. Hubbard, M.D., aged 61 years.

Deaths in fourteen Cities and Towns of Massachusetts for the week ending July 2, 1870.

Cities and towns.	Number of deaths in each place.
Boston	105
Charlestown	10
Worcester	12
Lowell	19
Milford	1
Chelsea	1
Cambridge	14
Salem	8
Lawrence	12
Springfield	12
Gloucester	4
Fitchburg	6
Somerville	5
Fall River	6
	215

Prevalent Diseases.	
Consumption	27
Pneumonia	11
Cholera infantum	20
Scarlet fever	4
Dysentery and diarrhœa	11
Typhoid fever	6
Measles	2

Cambridge reports one death from smallpox.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending July 2d, 105. Males 53—Females 52.—Accident, 5—anæmia, 1—apoplexy, 1—congestion of the brain, 2—disease of the brain, 4—inflammation of the brain, 1—bronchitis, 4—cancer, 3—cholera infantum, 7—cholera morbus, 1—consumption, 11—convulsions, 3—diabetes, 1—diarrhœa, 4—dropsy of the brain, 3—dysentery, 3—erysipelas, 2—scarlet fever, 2 typhoid fever, 4—gastritis, 2—disease of the heart, 5—homicide, 1—infantile disease, 1—insanity, 1—disease of the kidneys, 2—disease of the liver, 1—congestion of the lungs, 4—inflammation of the lungs, 2—marasmus, 3—measles, 2—old age, 2—paralysis, 1—pleurisy, 1—premature birth, 1—rheumatism, 1—scrofula, 1—suicide, 1—sunstroke, 6—unknown, 5.

Under 5 years of age, 43—between 5 and 20 years, 9—between 20 and 40 years, 27—between 40 and 60 years, 16—above 60 years, 10. Born in the United States, 67—Ireland, 29—other places, 9.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

NEURALGIA OF THE OCCIPITO-FRONTALIS MUSCLE; OPERATION FOR ITS RELIEF.

By John P. Mettauer, M.D., LL.D., Prince Edward Court House, Va.

The subject of this interesting case was a young man about 25 years of age, whose health previous to the attack of neuralgia had been infirm, and for the last ten months immediately preceding his application to the writer for advice he labored under scrofulous enlargement of the parotid glands. When the writer was consulted by the gentleman for his scrofulous affection, the parotids had attained the bulk of a large man's fist, and very nearly filled the spaces between the clavicles and inferior maxillary bone on each side. They were the largest tumors of the kind the writer ever saw, and he has witnessed a vast number of scrofulous enlargements of the parotids in the course of his professional life; and these large growths were entirely dispersed in two months and a half by a sojourn at, and from the daily use of the water of, the Rockbridge Alum Spring of Virginia. So perfect was the cure that not the slightest deforming fulness could be perceived in any part of the regions of the parotids, or of the neck, which had been occupied by the tumors; and the general health seemed entirely restored.

This young man returned to the writer, as well as he now remembers, a year and a half after his recovery from the scrofulous affection, for the purpose of consulting him in relation to a singularly painful affection of the head, from which he had suffered most tormentingly for eight or nine months. The pain commenced several months after his return home from the alum spring, moderate at first, but rapidly increased in severity, until it amounted almost to torture; greatly impairing the general health, depriving him of sleep and appetite, and defying everything in the way of treatment usually employed in painful affections of the head. The sufferings of this young man must have been intense, judging from the account he gave of them and from what the writer witnessed himself. There was never complete absence of pain, yet there was constantly, even during the remissions, enough to disquiet greatly and prevent refreshing sleep. But the paroxysms of intense suffering were agonizing in the extreme, and the case seemed as if it must soon end in death if unrelieved.

Regarding the disease as neuralgia, and hoping that, although the greater part of the occipito-frontalis was involved, heroic doses of quinine and narcotics might relieve the young man, it was determined to make trial of them, at least for a short time, and for one week this plan was energetically enforced, but without benefit, the sufferings of the patient being in no degree moderated; if any change had been effected by the quinine and morphine, there seemed to be an augmentation of the pain and giving way of the powers of the system.

Thus circumstanced, the writer determined to subject the case to surgical treatment, and the subcutaneous division of the occipito-frontalis muscle was the operation decided on, which was executed in the following manner. Seated in a moderately high chair, the occipito-frontalis muscle of the patient was divided subcutaneously from temple to temple, and from the root of the nose to within an inch and a half of the foramen magnum of the occipital bone, quite through its origin at the semicircular ridges, with a chain-supported knife. The instrument was entered at the vertex and carried beneath the muscle, edge down, quite to the bottom of the intended section; and by turning the cutting edge up the operation was effected by a sawing motion, withdrawing the knife at the same time, guided by the fingers of the left hand pressing on the scalp, which also prevented cutting through it. In succession the muscle was divided by four incisions executed in this manner, and without removing any portion of the hair, through a single scalp-wound. The operation was truly a bloody one, was brief, comparatively painless, and easy of execution; but the bleeding was speedily and perfectly arrested by the pressure of thick compresses applied firmly over the tracks of the incision, supported by a suitable bandage. In six days these extensive incisions healed perfectly, without the slightest mishap, and with no more than the requisite degree of traumatic inflammation, and the young man was entirely relieved of his painful disease from the moment the operation was performed, and has never experienced a return of it, now more than ten years since.

Some two or three years after the above case was treated, a similar one came into the hands of the writer, which, after the free use of quinine and narcotics without relief, was treated by incision, and with like success.

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SULPHATE OF QUININE IN THE TREATMENT OF SPONTANEOUS ERYSIPELAS OF THE FACE.

By Dr. Perroud, Physician to the Hôtel Dieu de Lyon. Translated from Annales de Dermatol. et de Syphilig., Deuxieme Année, No. 4, by James C. White, M.D., Boston.

It is not the tonic, neurosthenic action of sulphate of quinine, nor its antiperiodic action that we have desired to take advantage of in the following experiments, but certain properties it possesses with regard to the globules of the blood, which have been the subject of interesting investigations. These investigations, as well as the researches lately made in connection with the erysipelatous process, have served us as a guide; and inasmuch as they have determined our therapeutics, it is necessary that we should recall them in a few words.

Two years ago[*] M. Vulpian, after Koster, Volkmann and Steudener, announced the presence of a great quantity of white blood corpuscles infiltrated throughout the skin of parts affected by erysipelas. This observation was soon confirmed, and it appears to be demonstrated to-day that the infiltration of the skin by a great quantity of leucocytes forms one of the principal elements of the erysipelatous process, and that to this is to be attributed, in great part, the swelling of the affected parts. It appears to be shown also that these leucocytes may be rapidly re-absorbed and disappear, for they are not to be found two or three days after the disappearance of the swelling; moreover, it may be seriously regarded as probable that these elements have not been formed in the parts thus affected, but that they have penetrated thither by transudation through the walls of the vessels.

This last opinion is not incontestably admitted, we know, for many observers, among them K. Balogh, in Germany,[*] and Feltz, in France,[†] deny this transudation, because they have not been fortunate enough to witness it, but their negative observations are too few to weaken positive results, which are already numerous.

Without pretending to give a complete account, it will be remembered that in 1846 M. Waller, of London, announced in the *Philosophical Magazine* that he had seen the white corpuscles of the blood pass through the walls of the vessels where no previous rupture existed. This observation remained unnoticed until within the last few years Conheim, in Berlin, Stricker,[‡] Prussach, in Vienna, and others, have investigated the subject, and arrived at the same conclusions. Other observers, too, have confirmed the results obtained by these German microscopists. Among French physicians may be mentioned Flayem and Vulpian,[§] and before them Lortet[||] and Rauvier,[¶] the first of whom demonstrated that the white corpuscles are able to traverse animal membranes (the swimming bladder of fishes), and the second that they were able to gain entrance within the pith of the elder and its cells, and that it is even possible at times to determine their presence within epithelial cells, whither they have penetrated.

It appears to be proved, then, that leucocytes may be extravasated without previous rupture of the capillaries, and it is extremely probable, as we have above stated, that this extravasation constitutes one of the principal elements of the erysipelatous process. On the other hand, M. Lortet has taught us that the amiboid movements of the white corpuscles of the blood are necessary to their penetration through the tissues; that a young and healthy pus easily extravasates; that an old pus, the leucocytes of which are sick or dead, extravasates badly or not at all. If, then, we are able to lessen the vitality of the white corpuscles of the blood and to diminish the movements of their protoplasm by a drug, it is to be presumed that their extravasation would become impossible, and that the erysipelatous process would find itself by this means blocked, or even completely arrested.

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[*] Archives de Physiologie, 1868.

[*] Balogh, Archives de Physiologie, 1869, p. 152.

[†] Feltz, Journal de Robin, 1870.

[‡] Journal de l'Anatomie et de Physiologie de Robin, 1867.

[§] Academie de Médecine, Séance du 15 Février, 1870.

[||] Lortet, Annales de la Societe des Sciences Médicales de Lyon, 1868.

[¶] Rauvier, Comptes Rendus de la Société de Biologie, 1868.

The problem reduces itself, then, to find a substance capable of destroying the amiboid movements of the leucocytes in such doses that it may not be poisonous to the patient.

M. Binz* has devoted himself to this class of researches, and has studied the influence of various solutions, not only upon the vitality of infusoria, but of leucocytes held in suspension in serum, and has thus come to class the salts of quinine among the most poisonous. A solution of hydrochlorate of quinine one part in 800 immediately kills large infusoria, one part in 2000 causes them to perish in a few minutes, and one in 20,000 in a few hours. The effect upon the white corpuscles is the same; if one adds to perfectly pure serum a drop of blood taken from an animal in full digestion, the amiboid movements may be seen to take place without hindrance; but if this experiment is repeated with serum containing $\frac{1}{2000}$ of hydrochlorate of quinine the movements of the white corpuscles are seen to be arrested without the least alteration in the red globules.

These data would naturally lead to the employment of quinine whenever a pathological tendency to the extravasation of leucocytes exists, in a great number of inflammations for example, and especially in erysipelas. But in what dose shall it be administered?

M. Binz, without approaching the question of erysipelas, thinks that in order to arrest the progress of a suppurative peritonitis it would be necessary to give 12 to 15 grammes of hydrochlorate of quinine in twenty-four hours; but it seems to us that, in erysipelas at least, so large a dose is unnecessary. We know that a solution one part in 2000 will at once put a stop to the amiboid movement of the leucocytes, and that one part in 20,000 will arrest it after some hours. We know, too, that the quantity of blood in a person is about one kilogramme to 10 or 13 kilogrammes of the solid parts, and consequently that a person weighing 70 kilogrammes has 7 kilogrammes of blood. A dose of quinine expressed by the fraction $\frac{7000}{2000}$ or even $\frac{7000}{20,000}$ ought, then, to be enough to influence the white corpuscles sufficiently and to render their extravasation difficult or even impossible.

It is upon these data that we have based our administration of quinine in the dose of 30 to 40 centigrammes daily, a spoonful every half hour, in order to keep the patient under the persistent and prolonged action of the remedy. We have not used the hydrochlorate of quinine, however, for this salt, although the most soluble and most easily absorbed, we have been unable to procure, and have employed the sulphate so much employed in hospitals. Sulphate of quinine not being destroyed in the circulating stream and being found again in the urine, we might expect a direct action on its part upon the leucocytes during its passage through the blood, and consequently a happy influence upon the course of the erysipelas. These expectations have not been disappointed.*

From all these facts it follows that sulphate of quinine, like all treatment, has its indications and counter-indications in erysipelas. We have tried to show some of the circumstances which interfere with its action; but we have also wished to show that it possesses other than its neurosthenic and antiperiodic properties which may be used to advantage. Is it now really its antidiffusant action upon leucocytes which makes it so valuable in erysipelas? We are unable to affirm this at present. We need more observations and to apply a sort of counter-proof with other substances of reputed poisonous action upon the white corpuscles of the blood; but it may be affirmed that this hypothesis is in no way improbable, that pathological anatomy and physiological experiment give it an incontestable support, and that clinical observation is not unfavorable to it.

We believe, therefore, that we are able to conclude, from the preceding facts, that

1st. Sulphate of quinine, administered in moderate and fractional doses, promptly and completely arrests the course of non-traumatic erysipelas of the face, and extinguishes it most frequently on the second or third day of its employment;

2d. The effects of this drug are less evident in erratic cases of the disease and in those which are influenced by other constitutional affections, like rheumatism;

3d. The recent investigations of microscopists upon the diffusion of leucocytes suggest that it is by opposing this diffusion that sulphate of quinine acts upon erysipelas;

4th. It will be interesting to study clinically, as a means of controlling this hypothesis, the action of other substances which experimentation has shown to be unfavorable to the diffusion of the white corpuscles of the blood. We reserve, however, for the present the publication of the researches we have undertaken in reference to this point with perchloride of iron.

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* Binz, Sur la Mode d'Action de la Quinine, dans les Archives de Physiologie, 1868.

* Here follow the details of numerous cases of erysipelas treated in this manner, and observations on the effect of quinine upon the pulse in this disease, illustrated by syphygmographic cuts, at too great length for insertion in the Journal.—Translator.

RESULTS OF THE INJECTION OF PARASITIC SPORES INTO THE BLOOD OF ANIMALS.

By A. H. Nichols, M.D., Boston.

The interesting discoveries of Hellier, Zürn, Chanveau and Davaine, that there is contained in the blood in several contagious diseases numerous parasitic growths, known as micrococcus, mycothrix, leptothrix, &c., has stimulated further investigations in this comparatively new field, among the more recent of which are those of E. Semmer, Prosector at the Veterinary Institute at Dorpat, reported at length in *Virchow's Archiv* for April 16, 1870. His experiments consisted first in the repeated examinations of the blood of animals which had died of contagious diseases, with the view of detecting therein any parasitic growths, and his results may be briefly summed up as follows.

In cases of glanders, micrococcus cells and bacteridiæ are found in the blood, lymph and pus of animals which have died of this disease.

In charbon (malignant vesicle) and septicæmia, the blood is found to contain numerous micrococcus cells, and bacteridiæ (micothrix and leptothrix), both in the form of simple filaments and also arranged together so as to form a chain, the latter growths having been long known under different names.

That these infusoria, having the form of slender cylindrical filaments, really are parasitic growths, was proved in the case of five pigs, which had died of septicæmia.

In the blood of these animals, the actual growth of the filaments from the micrococcus cells was demonstrated under the microscope. The bacteridiæ seen in cases of charbon are for the most part shorter, more slender, and have a less distinct outline, than those found in septicæmia, where they vary in length, and consist of a single well-defined filament, and are at the same time less numerous than in the former disease.

These filaments, however, are not always of the same form, even in charbon, for here also variations are noticed, so that at times the parasitic growths in this disease resemble both in form and size those found in septicæmia.

These parasites, moreover, are found in other diseases characterized by blood poisoning, and even in the blood of some healthy animals a few micrococcus cells (penicellium glaucum) have been found, and in other cases both leptothrix and micrococcus (bacteridiæ) have been seen in the liver and intestines.

In order next to determine whether the contagious diseases above referred to are really caused by the parasites found in the blood, the author has tried a series of experiments with the following results.

Penicellium spores of the size of a red blood corpuscle were mixed with distilled water, and then injected by means of a small subcutaneous syringe into the jugular veins of two colts. The animals remained perfectly well, however, after the injection.

Several weeks later, micrococcus cells were injected into the same animals, and here again the injections were not followed by any symptoms of disease.

Injections of anthrococcus cells were likewise followed by negative results.

A second series of injections was next made with large masses of the spores of penicellium glaucum. In these cases slight feverish symptoms were created, which soon disappeared, however, and upon an examination of the animals after they had been killed, all the organs and textures of the body were found to be quite normal.

The author next injected bacteridiæ from the blood of an animal affected with charbon, using in this instance a bottle with a glass tube attached, as recommended by Hallier.

The spores of this parasite were put into distilled water, and a few drops of this mixture were then forced into the jugular vein of a colt. At the end of five days the animal remained to all appearance quite well.

Five days after the first injection, two ounces of the same fluid, containing bacteridiæ and micrococcus cells, were thrown into the jugular vein of the same animal, by means of a large syringe, armed with a small needle-like canula. This was followed by symptoms of fever, without loss of appetite, and the animal appeared soon to recover. On the tenth day after the inoculation, however, fever again set in, the appetite failed, the animal exhibited an unsteady gait, and died during the night.

The following was the result of the autopsy.

In the neck, around those spots where incisions had been made for the purpose of injections, the connective tissue was thickened and infiltrated with serum, exhibiting here and there ecchymosed patches. The jugular vein was filled with a dark colored blood of the consistence of tar, but otherwise not changed. Lower down on the neck, there was well-marked serous infiltration in parts remote from the point of injection.

On the left shoulder there was extensive extravasation of blood beneath the superficial integument, involving the connective tissue, and extending down beneath the muscles. In the abdominal and thoracic cavities and pericardium slight serous exudation. Numerous ecchymosed patches in the peritoneum, intestines, pleuræ, heart and lungs. Spleen enlarged, friable and gorged with blood. Liver of a yellowish-brown color, and the microscope showed beginning fatty degeneration in this organ. Kidneys studded with large, yellow, hardened masses; and congested white fatty degeneration of the epithelial cells of the uriniferous tubules communicated a yellowish-grey color to these entire organs. Lymphatic glands enlarged, softened, and several were of a browish-red color, caused by extravasation of blood. Brain and spinal cord infiltrated with serum, while the minute bloodvessels were distended with blood. Ventricles filled with a clear, colorless liquid. The blood was everywhere of a dark-brown color, of the consistence of tar, and contained large numbers of parasitic growths characteristic of charbon.

Here, then, charbon was produced in a colt by the injection of parasites taken from the blood of animals affected with that disease. In this instance the symptoms broke out on the ninth day after the injection, death occurring on the tenth day.

Selected Papers.

EXCISION OF THE ENTIRE SCAPULA.

From the history of a case where excision of the entire scapula was performed, with preservation of a useful arm, by M. Schuppert, M.D., of New Orleans, with photographs, we make the following extract:—

The patient, a female, æt. 36, suffered from a large tumor, comprising the right scapula, for which she had already undergone three operations. The first time she was operated upon in 1859 by Dr. Beck, a military surgeon in Freiburg; the second and third time in 1866 and 1867 by Drs. Miller and Gauss in Baden-Baden, but by these operations the scapula had remained intact.

The skin covering the tumor was rich in cicatrices, the marks of former operations. These cicatrices presented a bluish color and a smooth surface; were much thinner than the surrounding skin, and, like the rest of the integuments, movable over the tumor. The tumor, from its posterior margin to the acromion process, measured 0·18 metre, the largest extent in a vertical line being 0·21 metre. Active motions of the humerus were nearly arrested, the passive motions very much limited. The extremity could not be further removed from the body than to an angle of 45°. The extensive pain patient suffered in the arm brought her to me in search of relief. Having given her consent to a proposed removal of the entire bone, the operation was accordingly performed on the 30th of March, 1868, in presence of Drs. Barnes, Gray, Geutebruck, Riley, Schwarzwaelder, and some other medical gentlemen. Patient being in a deep chloroform narcosis, a crucial incision was made through the skin—one cut, beginning at the acromion process and carried over the most protuberant part of the tumor, ended near the spinal column; a second incision, over the middle of the tumor, bisected the first. The four skin flaps were dissected off and held back by sharp hooks. The acromion process was divided with a small saw, laying bare at the same time the scapulo-humeral articulation. The head of the humerus was then, by rotating the arm, dislocated inwards, to get at and remove the coracoid process. Lifting up the scapula by its glenoidal cavity, which was found to be involved in the disease, the whole of the scapula was detached from the body by keeping the knife close to the under-surface of the tumor. The removal of the tumor left the ribs visible through the cellular tissue, which was all that remained of the subscapularis muscle, lost in the diseased mass.

The bleeding was inconsiderable, the main vessels having probably become obliterated by the former operations; with the exception of a few muscular branches, no arteries had to be ligated. The skin flaps were adjusted and united by interrupted pin sutures, leaving an opening at the most dependent part to permit the draining of the secretion. Acet. of morphia, 0·03 gramme, was subcutaneously injected. After patient had perfectly recovered from the anaesthetic condition, she was unconscious that the operation had been performed. The arm was bandaged and kept close to the body, supported by a sling.

Patient suffered much nausea subsequently and vomited during several days from the effects of chloroform. No unfavorable symptoms happened to require medication. A nourishing diet was ordered from the first day and continued during the convalescent state.

The sutures were removed on the third day. Most of the incisions had healed by first intention. Suppuration was considerable, and notwithstanding the well draining of the wound two abscesses formed in the arm, discharging a great quantity of pus. The wound was syringed out daily with glycerine containing ten per cent. carbolic acid. On the 10th of June, the last secreting opening had closed.

At the present date, eighteen months after the operation, there is no indication of reappearance of the disease in any part of the body. The skin, of which no part had been removed, though after the excision of the tumor it formed a large sac, has so contracted that a part of the cicatrix forms now a portion of the covering of the humerus. The patient, who enjoys excellent health, has thrown away the sling long ago ; the arm has no artificial support, and is a more useful instrument than before the operation. Though its motions are limited, there is sufficient strength in the extremity to lift a weight of thirty pounds and throw it a fair distance.

The tumor weighed nearly six pounds, and measured respectively 0·35 and 0·40 metre in circumference. From the original scapula but one third of the spina, a small portion of the coracoid process and the centre of the glenoidal cavity remained intact ; all the rest was involved in the growth. The tumor consisted of hyaline and fibro-cartilage, with deposits of carbonate of lime in the interspaces of the cartilaginous tissue. Towards the centre true ossification had taken place. We have to consider it, therefore, to be an osteochondroma.

Those interested in the history of this operation I refer to a valuable contribution of Dr. Stephen Rogers, of New York, in the *American Journal of the Medical Sciences*, October, 1868.

EXTRA-UTERINE PREGNANCY—SPONTANEOUS DELIVERY BY THE RECTUM—RECOVERY OF THE MOTHER.

Reported by W. F. Peck, M.D., to the Iowa State Medical Society, Davenport, Iowa.

Mrs. J. N. C., æt. 33, native of New York, nervous sanguine temperament, has had two natural labors at full term. The exact time of conception is not known, but she is certain that it occurred some time in April. The symptoms were entirely unlike those experienced during former pregnancies. She was, after the second month, uncommonly sick at the stomach, and in fact it was with the greatest difficulty that she retained sufficient nourishment to sustain life. When carrying the other children this symptom was not present to any appreciable extent. (From the commencement of conception there was inability to move about.) The abdominal development was different from other pregnancies in that there appeared to be more development upward, but not without more or less proportional development anteriorly and laterly. I saw her often during her gestation, but gave little treatment other than advice. On Saturday, September 4th, her husband informed me that he must be away from home in attendance upon court at Marengo, Iowa county, in consequence of which he desired me to visit her daily and furnish such relief as indications might suggest, thinking that possibly she might not have sufficient strength to carry the child to full term. On Friday, September 9th, I called upon her at two o'clock, P.M., and found her sitting in a rocking chair near the bed which she had left only a few minutes before, in order to obtain rest by changing her position. There was considerable pain over the whole abdomen, which she described as being of a "twisting" character. The entire abdomen was tympanitic, and so much distended as to cause her to appear as though she might be six or seven months advanced in pregnancy. Whenever pressure was made even of the slightest character, the pain produced was almost unbearable. The pain was greatest over the right iliac fossa, although there was general tenderness. The stomach was unusually sensitive to the presence of fluids. I assisted her from the chair in which she was sitting, into the bed, and went down stairs to see Dr. Ely, of Cedar Rapids, who had just arrived to visit the family, he being an old and intimate friend.

After describing to him her condition

during the progress of the gestation, we started to go up stairs and see her, when we were arrested by a relative who informed us that Mrs. C. was having a passage from the bowels. We returned to the parlor, when not five minutes had elapsed before we were suddenly summoned to the room of Mrs. C., where she was found upon a "chamber" in much pain. She informed me that the child had been born by the "back passage." I lifted her from the vessel to the bed, during which the child, or fœtus, fell back into the chamber, its weight, together with tension, having broken the cord. About six inches of the umbilical cord still remained outside, which, upon further examination, was found to be protruding from the anus. I examined the vagina and uterus to ascertain if the cord did not enter the vaginal canal or the womb; but, strange to relate, the uterus was not enlarged and the "os" was normal and healthy. The vagina was intact throughout, and there was no blood nor fluid of any description in the vagina or womb.

Appreciating that the case was decidedly anomalous in character, I requested Dr. Ely to verify my examination, which he accordingly did, reporting the same result. I then directed him to retain his hand within the vagina, and permit me to pull on the protruding cord, while he should carefully ascertain if it could be felt through the vaginal and rectal tissues. He did as directed, and could distinctly feel the cord by following it from the commencement of the vagina up to and even above the attachment to the neck of the uterus. I then proceeded to follow up the cord by introducing my finger into the rectum. I traced it up into the rectum for about five inches, and upon withdrawing my finger, it was covered with blood, which fluid in a liquid and clotted form was appreciated in the rectum. Gentle traction was then made upon the cord, hoping thereby to bring away the placenta; but the cord broke internally, beyond the reach of the finger, without any after-birth coming away. No rent of any kind could be ascertained in the rectal tissue.

Dr. Ely made the same examination. I then introduced a duckbill speculum into the anus, when the blood, fluid and clotted, escaped to the amount of about one-half pint. After the blood passed away she experienced very great relief. There was also considerable discharge of gas, which was of a very offensive character. The fœtus showed some evidences of putrefaction, it probably having been dead for several days. The intestines and liver of the child had an extra ventral development, which appearance they now present. The fœtus, judging from its development and size, is of about four months, and perhaps more. Mrs. C.'s condition after the examination, was that of marked exhaustion. Pulse small, and 100 in frequency to the minute; features cadaveric, and general pallor marked the entire surface. Brandy was given in small quantities, and volatile stimulants were freely exhibited. She gradually recovered from the condition of prostration, and rested much better than she had done for several weeks. The tympanites and tenderness disappeared to a great extent during the night, and in fact she slept without medicine of any kind for at least four hours. To quench the thirst, she took small pieces of ice. The discharges of blood, of which she had several, were voluntary, and came from the rectum.

Sept. 10th, P.M. Pulse 110 and small. Considerable tympanites, with much pain in the region of the right ovary. General febrile movement. More or less sickness at the stomach, with a corresponding inability to retain nourishment or drinks, and several discharges of blood have voluntarily escaped from the rectum. The character of the discharge is not unlike coffee grounds in appearance. Directed a weak solution of carbolic acid to be used as an injection every four hours. Counter-irritation to the epigastrium.

Sept. 11th. General condition better than yesterday. Less sickness at the stomach. Small particles like placental texture escape with the injection.

Sept. 12th. Condition still improving, although there is considerable pain in the right iliac fossa.

Sept. 13th. She slept very well during the night. General condition good. Several pieces of tissue passed from the rectum with the injection. Takes fluid nourishment, all of which she retains, although there exists a little nausea.

Sept. 17th. Her condition is not so favorable. Pulse 100 and weak. Respirations 22 to the minute. Marked tympanites with general tenderness over the entire abdomen, but particularly in the region of the right ovary. Stomach rejects nourishment. Treatment — veratum viride, six drops every four hours. McMunn's elixir 40 drops every three hours per rectum.

Sept. 18th. Pulse 118 and feeble; respirations 24; extensive tympanites; much pain upon slightest pressure over entire abdomen; sickness at the stomach; marked febrile movement. Treatment: verat. viride 8 drops every four hours per rectum; McMunn's elixir 30 drops every four hours; mustard to the epigastrium, with emollient applications to the abdomen.

Sept. 19th. Pulse 130; respirations 27; tongue furred and dry; other symptoms much the same as yesterday. Treatment continued unchanged.

Sept. 20th. Was called at 10 P.M. last night; Dr. J. Farnsworth, of Clinton, saw her with me. Found her in great pain; markedly tympanitic; pulse very small and could not be counted, the pulsations being so rapid; respirations 34; surface hot. Gave small dose of brandy and carbonate of ammonia. After consultation informed her husband that death seemed inevitable. In about twenty minutes the pulse became slower and stronger; the respirations became less frequent. A large quantity of gas escaped, which seemed to give her much relief. Dr. Farnsworth remained with her during the night. In the morning I found her condition much better. From this time she continued to recover slowly, but did not leave her bed until October 28th; and did not leave the house until December 29th. The last time she was out before her delivery was July 4th. The dejections continued to be tinged with blood until October 1st. No after-birth came away other than the small pieces contained in the dejections. She is now quite well and exhibits her ordinary health and weight, 85 pounds. She has, however, an occasional pain and "weakness" in the region of the right ovary, but in other respects she is perfectly well. I omitted to state in the proper place that Dr. A. S. Maxwell was present soon after delivery and made an examination, when he found, as heretofore stated, the vagina and womb healthy; but upon examining the rectum the bloody discharges were found. The patient was seen during her convalescence by Dr. W. A. Hosford, of Davenport, and Dr. McKennon, of Muscatine.

Remarks.—The conception probably occurred in the same manner as in all cases of extra-uterine pregnancy. The placenta I believe to have been attached to the fimbriated extremity of the Fallopian tube, and the development was downward by the side of the rectum, the tissues of which were more or less attenuated by continuous pressure, which was occasionally augmented by paroxysms of coughing. A fact which was not mentioned in giving the early history of the case, is that when she arose to sit upon the chamber for the purpose of having a passage from the bowels, she had a severe coughing spell, during which the child, or fœtus, was spontaneously born *per anum*, having lacerated the rectal walls to allow of its escape thus abnormally into the outer world.

I have produced the foregoing case in detail, in view of the fact that the records of obstetrics contain no precedent.—*Med. and Surg. Reporter.*

Reports of Medical Societies.

MAINE MEDICAL ASSOCIATION.

The Medical Association of Maine held its annual Convention at Bangor, commencing June 28th, and continuing three days. The venerable Dr. McRuer, of Bangor, occupied the chair. The convention was opened by prayer by Rev. Dr. Pond, of Bangor Theological Seminary.

The exercises of the first day were brief. Dr. Hart was introduced as a delegate from the New York Medical Association. The Secretary read a biographical sketch of Dr. Simonton, lately deceased. Dr. Weeks, of Portland, read a paper on the Therapentical Action of the Hypophosphites. Dr. Cummings, of Portland, delegate to the National Convention for the Revision of the Pharmacopœia, read a report. The officers for the ensuing year were then elected, as reported in the Journal for June 30.

2d Day.—The convention met at 8½, A.M. The Report on Epidemics was read by Dr. Forster, of Portland, for Cumberland Co., Dr. Brown for Oxford Co., Dr. Buxton for Knox Co. Dr. Snow, of Winthrop, read a paper on Puerperal Convulsions, which was referred to the Committee on Publication. The treatment advocated was that of bloodletting. The subject was discussed by the members of the Association. Dr. Gilman, of Portland, read a report on the Maine General Hospital. Dr. Sanger, of Bangor, communicated a paper on Eczema.

At 3 o'clock, P.M., the report of Prof. W. W. Greene, of Portland, on Ovariotomy, was read, followed by remarks on the subject by Drs. Gordon of Portland, Brickett of Augusta, and McRuer of Bangor. Dr. Huckins, of Corinth, read a report on Inversion of the Uterus. Various cases were presented by Drs. McRuer, Gordon, Laughton, Severy and Jones.

EVENING.—Prof. Goodale, of Brunswick, delivered the oration.

3D DAY.—The Constitution was amended so that physicians above a certain age should be retired at their request. The thanks of the Association were tendered to the authorities of Bangor and to Dr. McRuer for hospitalities received, and the Association then adjourned to meet at Portland on the second Tuesday in June, 1871.

Bibliographical Notices.

A Practical Treatise on the Diseases of Children. By J. FORSYTH MEIGS, M.D., and WILLIAM PEPPER, M.D. Fourth Edition (of Meigs on Diseases of Children), revised and greatly enlarged. Philadelphia: Lindsay & Blakiston. 1870. Pp. 921.

On the Wasting Diseases of Infants and Children. By EUSTACE SMITH, M.D. Lond. Philadelphia: Henry C. Lea. 1870. Pp. 195.

THE little ones have been attracting much attention lately. Within the last two years many works have been published which treat of the diseases of infancy and childhood. Hillier, J. Lewis Smith, Vogel, have been given to the English-reading medical practitioners, and Holmes has described the surgery of childhood. Now is offered a new edition of an old treatise taking a general view of childhood's diseases, and a new work embracing only a part of the subject.

Many are already familiar with Dr. Meigs's treatise; the present issue is an enlarged edition, in the preparation of which Dr. William Pepper has been associated. Many of the articles have been more fully considered, others have been rewritten, and seventeen articles have been added, the latter treating of "diseases of the heart, and cyanosis; diseases of the cœcum and appendix vermiformis, and intussusception; chronic hydrocephalus, tetanus, atrophic infantile paralysis, facial paralysis, and progressive paralysis with apparent hypertrophy of the muscles; rheumatism, diphtheria, mumps, rickets, tuberculosis and infantile syphilis, typhoid fever and sclerema." To accommodate the new material, more than two hundred pages have been added to the work.

There are several tables showing the relative mortality in the city of New York of allied diseases, as croup and diphtheria; scarlatina and measles; pneumonia and bronchitis; cholera infantum, diarrhœa and dysentery. The influence of temperature and season on the prevalence of different diseases is clearly shown by these tables.

All surgical diseases are omitted; congenital malformations are at most only casually noticed, except those conditions leading to cyanosis. Diseases of the secretory and excretory organs are not considered separately. Bright's disease does not find a place. Skin diseases are very fully noticed.

Only two quotations will be made, from the article on Indigestion:—

"*Habitual Indigestion* in infants causes a train of symptoms which are different from, and much more severe than those just described. Of these the most important are: frequent attacks of nausea and vomiting, and of simple diarrhœa repeated for days, weeks or months in succession; paleness, or some other unhealthy tint of the cutaneous surface; continual restlessness and discomfort, with fretting or crying, particularly in the after part of the day and during the evening and night, in place of the natural ease and quiet of a healthy infant; constant fits of the most violent screaming from colic, sometimes lasting for hours; dull and languid expression of the countenance, or else an uneasy, contracted look, like that produced by continued suffering; more or less emaciation; failure of the natural growth in stature and size, so that the child is small and puny for its age; want of calorific power, causing the child to suffer unusually from cold, as shown by frequent coolness of the hands and feet; irregular appetite, which makes it necessary to tempt by frequent changes of the food, or more or less complete anorexia; and, lastly, the various symptoms that indicate an impoverished state of the blood and bad nutrition."

In reference to the treatment of this condition he says, among other things:—

"If the patient is fed wholly or in part, it is essential to regulate the diet to suit the state of the digestive function. Milk ought in all cases to form the basis of the food, unless it has been found by patient trial to be absolutely repugnant to the stomach. We have often found that infants who had been thought quite incapable of digesting cow's milk, could do so very readily when it was very much weakened with water. * * * * If we conclude that milk cannot be digested by the child, it is best to try cream. Of this, one part to three or four of water, may be given.

When neither of these can be taken, some of the farinaceous substances may be tried —arrowroot, sago, barley, tapioca, oatmeal or rice. We are clearly of the opinion, however, that these articles, prepared with water alone, never agree with children when they are continued for any considerable length of time."

The work is rather voluminous and contains much which is of a scientific interest, but with this also still more which is of practical value; and its directions in regard to hygienic precautions and to the necessity of paying attention during treatment to little things in diet and regimen are valuable and wise. A copious index is furnished, which will prove of great advantage in the daily use of the work.

Dr. Smith's treatise is a reprint of the London edition, and considers a few diseases, which are usually attended with more or less wasting, more fully than they are treated in works devoted to a general survey of the diseases of childhood. There is first an introductory, giving general directions in regard to the diet and describing general symptoms. Then follow nine chapters, devoted respectively to Simple Atrophy from Insufficient Nourishment; Chronic Diarrhœa; Chronic Vomiting; Rickets; Congenital Syphilis; Worms; Chronic Tuberculosis; Chronic Pulmonary Phthisis; Tuberculization of Glands.

The first chapter gives a good account of the causes which produce wasting, and reference is made to several popular delusions which it is almost impossible to eradicate from the minds of certain nurses. "The very fact that the secretion of saliva in the young child does not become established until the third month after birth, seems to indicate that before that age farinaceous articles of diet are unsuited to the infant." Very full directions are given for the regulation of the first efforts of the mother to suckle her child. The importance of suckling the infant during the first few weeks of its life is strongly insisted on. "The new-born infant should be put to the breast a few hours after birth; or as soon as the mother has recovered from the first fatigues of labor." The advantages of this course are enumerated. "The child should take the breast at regular intervals every two hours during the day for the first six weeks, and he should suck from each breast alternately." "He should be fed for the last time at 11, P.M., and be then put to rest in a cot in the nurse's room until 5 o'clock on the following morning." Many of these directions are left for the nurse to give, and so young mothers fall into ways which might be avoided if the physician would leave careful directions.

The short chapter on chronic vomiting is useful. The cause is considered to be premature weaning and feeding with improper food.

The importance of recognizing the earliest signs of rickets is strongly insisted on. "Plumpness is no proof of the absence of rickets, for a child may be extremely fat and yet be rickety." "It is only when the disorder is at its very commencement, or appears first about the end of the second year, that it is so liable to be overlooked."

The early symptoms referable to rickets are profuse sweating of the head, kicking off the clothes at night, and, later, tenderness.

He does not consider rickets a diathetic disease, but rather that it is induced by certain causes whose action is known, and it is not hereditary; in this latter respect differing from many authors. In the treatment, diet and hygienic measures are especially recommended.

In several places in the work, the inunction of cod-liver oil is recommended. This treatment is one which deserves notice in many diseases of the digestive and assimilative organs.

The other chapters also merit notice, but the manner in which the various subjects are treated has been shown by the above quotations, and this notice has been sufficiently extended. The index is unusually complete.

W.

Anatomy, Descriptive and Surgical. By Henry Gray, F.R.S., &c. &c A new American, from the Fifth and Enlarged English Edition. Philadelphia: Henry C. Lea. 1870.

We find once more upon our table an edition of this well-known and valuable text-book. In this edition the plan of the work has been so far altered that the portion on General Anatomy, which was previously scattered throughout the book, has been collected into an introductory chapter, and re-written, so as to furnish the student a succinct introduction to the study of Microscopic Anatomy; and to this has been added a short description of the chief processes of the development of the ovum, and of the structures characteristic of the fœtal state. The sections on Regional and Surgical Anatomy and the excellent plates of this work are well known, and make it one of the most valuable books of reference.

Renal Diseases: A Clinical Guide to their Diagnosis and Treatment. By W. R. Basham, M.D. Philadelphia: Henry C. Lea. 1870.

The author of this little work divides it into three sections. The first treats of diseases marked by symptoms more or less of an inflammatory character, excited by various causes and indicated by bloody, albuminous or purulent urine; the second includes diseases chiefly characterized by evidence of degeneration or decadence of the tubular, cellular and vascular elements of the kidneys; and the third is devoted to the urine in health and disease. The book is well and carefully written.

Medical and Surgical Journal.

BOSTON: THURSDAY, JULY 14, 1870.

In our Editorial of last week, certain expressions were used, showing that it was the intention of the present incumbent of the chair to pursue such a course as, in our opinion, would best meet the views, as it would best subserve the interests of *every* member of the profession. We took occasion to speak of our freedom from alliance with any individual or party interest, holding it to be the Editor's duty, *in a technical Journal*, to keep aloof from partizan politics, should such arise, and only to become the chronicler of, not the participant in professional differences. Feeling ourselves to be in cordial personal relationship with all our brethren, we trust sedulously to maintain this position during our period of office.

The Journal started, with the last number, not with a policy differing from that of former years, as the Editor understands it, but only so far differing from it as the personal thoughts and feelings of one person must naturally be at variance with those of another. Nor should a technical Journal, the exponent of an exact science (as ours is), be considered the mouth-piece of one man or of a few men; as long as it is open to the contributions of the entire profession, it cannot be looked at other than as *the profession itself* and simply as its mouth-piece. It possesses an actual entity, not as it represents an individual, a clique, a party, but only as it is the entire body, and, in this way, any means taken to advance or retard its interests, is so much influence exerted for or against what we should all esteem sacred, the honor of our calling. We therefore feel convinced that, in some such manner as is expressed in our Editorial of last week, the duty of every fair-minded professional brother is, clearly, to strengthen the hand of the Editor.

We have commenced the present volume with an entirely fair sheet, in friendly relations, so far as the present *regime* is concerned, with the profession singly or in any corporate capacity whatever, not responsible for the past and only for such portion of the future as our own Editorship may cover, and, as we expressed ourselves in the last issue, determined to conduct the Journal in such a manner as a dignified estimate of the office shall suggest.

THE BOSTON CITY HOSPITAL.

We find on our table the Sixth Report of the Trustees of the City Hospital, it being for the sixteen months ending April 30, 1870. During the year there have been treated in the Hospital 3,235 patients, with a daily average number of 178½. In addition to this number, 11,721 out-patients have received the benefits of the institution. During the year 1868, the average number of patients for several weeks reached as high as 230, the utmost capacity of the Hospital; during the term ended by the present report, however, the largest number of patients at any one time was 214, and this number would have been considerably increased had the patients been, at all times, proper subjects for the Hospital. With these facts in view, and with the present prospective growth of the city, it becomes a grave question for the City Government to settle whether increased accommodations are not, even now, required. The greatest want of the Hospital at present is a more suitable operating room and a new dead-house. We are glad to note that, in answer to urgent calls of the staff, hospital tents were provided for some of the surgical cases during a few weeks in the summer. The facts obtained in the armies of Europe and in our own late war demonstrate the great wisdom of our surgeons in making such demands.

The department for out patients has extended its benefits to an increased number of patients; a special department for the treatment of diseases of the ear has been established, under the charge of Dr. J. Orne Green. As a new department, it is interesting to note that 436 cases of diseases of the ear were treated, exhibiting the most varied forms of aural trouble and affording a rich field for study and teaching. During the year the institution has suffered the loss by death of Dr. S. D. Townsend, of the Board of Consultation, and Dr. Francis C. Ropes, one of the Visiting Surgeons. Their places have been filled by the election of Dr. C. E. Buckingham in place of Dr. Townsend, and Dr. W. C. B. Fifield in place of Dr. Ropes. Dr. George Derby has also resigned his position of Visiting Surgeon, and Dr. William Ingalls has been appointed in his place.

Detailed reports of the various departments of the Hospital are made by the members of the Medical Staff, with the usual carefully arranged and valuable tables. In noticing the reports of the outpatient department, which strangely enough are placed first, we cannot help expressing the fear that here, as in all our other institutions, the ease with which medical advice is obtained is the cause for its great abuse—that assistance is rendered to undeserving persons, and our younger physicians deprived of the fees, however small, which they might obtain. Those who are engaged in public charities are constantly liable to imposition by these systematic medicine takers, and it is no unusual circumstance to find patients taking three different medicines from as many different physicians at the same time. The question here, as in all other similar institutions, is how to regulate the method of application for treatment so as to make the institution a blessing instead of an injury to the community.

The admirable classification of medical and surgical diseases treated within the Hospital is the same as has been employed for several years, but is no less worthy of note.

We cannot fail to notice various typographical errors in the names of the diseases, which, however, we very well know are not due to any want of care on the part of the medical gentlemen of the Hospital. Tatuts mesenterica, fausilitis and similar words are *suggestive* of certain diseases, but hardly have a place in any legitimate medical nomenclature.

ETHER AND CHLOROFORM.

L'Ether doit etre préféré au Chloroforme.—M. Petrequin, ex-surgeon-in-chief of the Hôtel Dieu in Lyons, in a new work just issued in Paris, devotes two memoirs to the subject of ether and chloroform, especially in reference to their comparative safety. The first memoir is a page from the history of surgery up to the present day; containing, in brief, the birth of anæsthesia, the employment of chloroform, the resistance to ether at Lyons—at the head of which was the author himself—the causes which have prevented the more common use of ether, such as the imperfection of instruments, the impurity of the ether and the inexperience of the operators, a description of the method employed by the author with refined ether, a parallel drawn between pure ether and chloroform as anæsthetic agents, and, finally, the decisions unanimously agreed upon by the Society of Medicine of Lyons, after several meetings devoted to a discussion of the subject. The resolutions adopted by the Society are as follows:—

"1. Ether employed to produce anæsthesia in surgical operations is less dangerous than chloroform. 2. Anæsthesia is obtained as constantly and as completely by ether as by chloroform. 3. Although ether has inconveniences which chloroform does not present in the same degree, these are of little importance, and do not compensate for the danger incurred in using the latter article. 4. Consequently, ether should be used in preference to chloroform." M. Petrequin commences his second memoir by meeting certain opinions of M. Sedillot, who has said, "Pure chloroform, properly administered, never kills the patient." To which M. Petrequin replies, "There is no *certain* means known to avoid death by chloroform;

if chloroform kills the patient, it is not because it is impure or wrongly administered, but because it is, in its very nature, a *poison;* death can occur instantly on the inspiration of but a few drops of this anæsthetic; neither age, sex or a good constitution give security from the danger."[*]

We cannot fail to trace the marked parallelism between the views of M. Petrequin and those of Dr. Henry J. Bigelow in his lecture before the medical class, which was communicated to the JOURNAL.[†] We refer also to the conclusions arrived at by the same Society (of Lyons) in 1868, and reported in our columns.[‡] In fact, these opinions have been strenuously urged by Dr. Bigelow and others in this community for the last twenty years. The specific cause of danger and liability to death by "*shock*" from chloroform were distinctly pointed out by Dr. B. in 1848.[§]

EXPERIMENTS ON THE ABSORBENT POWER OF THE BLADDER.—Physicians and physiologists are by no means agreed on the power of absorption possessed by the mucous membrane of the urinary bladder. While some assert that the excrementitious substances of the urine would constantly be carried back to the circulation if this absorption took place, others deny this fact. M. Beclard[§] asserts that the fluids contained in the excretory reservoirs (the urinary and biliary bladders) are in the process of absorption. We should remember that the epithelial lining membrane of these viscera consists of stratified layers of pavement epithelium, which is less easily traversed by fluids than the simple membrane of the serous cavities. Nevertheless a slight absorption takes place in these organs. The morning urine, which has remained a part of the night in the bladder, is of a darker color than the urine of the day, and also than that which has been passed after taking fluids.

Recent experiments of Bert and Jolyet confirm those of M. Ségalas, and demonstrate the fact that the bladder in health rapidly absorbs certain substances introduced into it. A solution of strychnia, one part in one hundred, was carefully injected into the bladders of several rabbits, causing their death at the end of four minutes, although a few milligrammes only of the salt had been introduced, and a part of this had been removed by injections of water on the first appearance of symptoms of poisoning. Autopsy showed that the mucous membrane of the viscus remained healthy. Injections of a solution of atropia did not kill the animal or sensibly diminish the pupil.

The possibility of causing certain substances to be absorbed by the healthy bladder offers a therapeutic resource of considerable importance; in cholera, for instance, where medicines cannot be absorbed by the stomach and intestines, advantage can be taken of the circumstance that the bladder is habitually empty, for the injection of certain solutions which experience has shown to be absorbed. During an epidemic of cholera, M. Brown Séquard injected into the bladder of several patients laudanum and alkaline carbonates, and he was convinced that these substances were absorbed in considerable amounts. Experiments of a similar character have been tried in Germany and Italy. — *L'Union Méd.*, April 30, 1870.

REPORTS OF COMMITTEES—HOW TO BE DISPOSED OF.—When a committee is ready to report, the *first question* is whether the assembly will *receive* the report.

If the assembly, either by formal vote, or by tacit consent, allows a report to be read, the report by such permission is *received,* and goes to the clerk for his files, that is to say, in parliamentary language, lies on the table.

The committee, as soon as their report is read, is dissolved; and cannot again act without new power from the assembly.

The *report* having been *received,* as above indicated, lies on the table, and the matter may end at this point without further action being taken, or a word said.

But if the assembly wishes to discuss, or take action on, any part or the whole of a report, it can do so as soon as the report is read, or at any subsequent time, upon motion properly seconded.

Whenever a report, or any part of it, is thus taken up, it may be treated and disposed of precisely as any other proposition—it may be allowed to stand as it came from the committee, or it may be amended in its statement, reasoning, opinion, or in its resolutions or other propositions, if it contain such—any portion being taken separately, several portions together, or the whole at once.

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[*] L'Union Médicale.

[†] Journal, February 13, 1868.

[‡] Journal, February 8, 1868.

[§] Trans. Am. Med. Assoc., vol. i., 1848, p. 213.

[‖] Dictionnaire Encyclopédique des Sciences Medicales.

In whatever way the report be treated, the final question on any portion, or on the whole, as the case may be, is on acceptance, and "*when accepted it is adopted*" (Cushing, p. 151, §295) by the assembly, and becomes the statement, reasoning, opinion, resolution, or other act, as the case may be, of the assembly, the same as it would have been had it originated in the assembly itself without the intervention of a committee.

Though the question may be very properly put on acceptance of a statement of facts, reasoning, or opinion; on agreeing to resolutions or other similar propositions; on adopting the order, or on passing or coming to the vote recommended, &c.; all these phrases are only equivalent to *acceptance*, which comprehends them all.

The points, then, always to be kept in mind are, that a report is *received* by being allowed to be read; and that the whole, or any part of it, *when accepted is adopted*.

If the above exposition, strictly in accordance with Cushing and proper parliamentary usage, were constantly borne in mind by presiding officers, the deliberations of our societies would be greatly facilitated, and much confusion avoided.

C.

Death of Dr. Charles A. Pope, of St. Louis.—We regret to announce the sudden death, on the 5th instant, in Paris, of Dr. Pope, of St. Louis. We copy from the *St. Louis Republican* the following facts regarding him:

"In this instance, death has indeed chosen a shining mark; for Dr. Pope not only ranked among the leaders of his profession in America, but as a refined and cultivated gentleman, an energetic and public spirited citizen, a faithful and unselfish friend, a man whose character in all the varied relations of life was spotless and irreproachable, his loss is a calamity of no ordinary magnitude. A residence of nearly thirty years has given him a strong hold upon the affections of the people of St. Louis, and it is not too much to say that his death leaves a vacancy in social as well as medical circles not easily filled. Nor is Dr. Pope's reputation confined alone to our city and State. Far and wide through the valley of the Mississippi are scattered those who have experienced the benefits of his skill, who will mourn his untimely departure, and love and revere his memory as one who has contributed largely to lessen the sufferings of the human race.

"Dr. Charles A. Pope was born at Huntsville, Ala., March 15, 1818. His father, Benj. S. Pope, was a planter in easy circumstances, and gave him the advantages of a thorough education. He was sent at an early age to Green Academy, at Huntsville, and from thence was transferred to the university of Alabama, where he graduated. After passing through the necessary preliminary studies in his native town, he entered the Cincinnati Medical College, where he attended a course of lectures, and afterwards passed through the regular course and graduated with high honors at the University of Pennsylvania. Immediately thereafter he visited Europe, and spent two years in travelling through France and Germany, and availing himself of those superior advantages in surgery which Paris alone can afford. Returning from abroad, he settled permanently in St. Louis, in 1841, where his attainments speedily gave him an extensive practice. Soon after his arrival he was elected professor of anatomy in the St. Louis University, and a few years later was chosen professor of surgery. His efforts in organizing the St. Louis Medical College, and the eminent success which has crowned those efforts, are too well known to need comment. He took a special interest in our common school system, and did much to secure its high state of efficiency, serving for some time as chairman of the committee on high and normal schools, also as trustee of Washington University, and one of the Board of Managers of O'Fallon Polytechnic Institute. For several years past, however, he had retired from the active practice of his profession, and resided a greater portion of the time in Paris. He paid a brief visit to St. Louis only a month or two since."

Dr. Pope leaves a widow and several children. A meeting of the physicians of St. Louis was held in that city on the 6th inst., to pay a tribute of respect to his memory.

Cerebro-Spinal Meningitis.—On the 12th of February last, epidemic meningitis broke out in this locality, ten deaths in all occurring, eight of them during the first eight days. It has been confined to a locality of four miles square. I will give, briefly, the symptoms and treatment we have adopted.

The first symptom was a chill, which lasted from one hour to six hours before reaction took place. Some few, in fact all of the fatal cases, never seemed to have a reaction at all, dying in from eleven to thirty-six hours; in fact, were dead before fever formed at all; the pulsation at the wrist being gone while the external arteries of the neck and face could be seen beating with a fretful or fluttering motion. If reaction came on, there were more or less acceleration of pulse, heat of skin, intense headache either in front or back part of the neck, in some cases extending down the spine; partial paralysis in some cases; in fatal cases, coma more or less profound came on in from two to six hours, and lasted till death. The tongue generally was covered with a thick, creamy coating, with more or less enlarged red papillæ, protruding through the coating.

About one-half of the cases were profusely covered with petechiæ, and dark purple spots, like ecchymoses, from the size of a pin-head to two inches in diameter. In those cases that recovered, these spots sloughed, and came out by a well-marked line of demarkation.

The bowels and urine were apparently normal. Some cases were attacked as an ordinary case of inflammatory rheumatism, except the heat and swelling of the joints. The attack in all, as far as my knowledge goes, was sudden, and all of the fatal cases but two, were attacked between midnight and 5 A.M. The pupils of the eye in all were largely dilated. The fatal cases occurred in those from five to twenty years of age; males and females about equal in number. Convalescence in the recoveries was slow; relapses none.

The treatment consisted in bromine, in large doses in some cases, grs. v., every three hours, with capsicum; tinct chloridi ferri, in large doses, with stimulants; sinapisms to the spine, chest, and extremities.

The quinine was generally given at first in hot brandy sling. In some cases with a strong tendency to putrid symptoms, chlorine mixture was given quite freely. Such is a brief outline of the history, symptoms, and treatment of the disease as it appeared here.—O. Logan, M.D. *Albion, Erie Co., Pa., in Med. and Surg. Rep.*

[The above description corresponds closely to the cerebro-spinal meningitis which was so terribly fatal among the drafted men in Illinois, in January, February and March, 1865. In February, 128 deaths occurred in Camp Butler alone. The nocturnal onset, and the excruciating pain in the back of the neck, we well remember as prominent symptoms. The most varied and heroic treatment was utterly unavailing.—*Eds. Med. and Surg. Rep.*]

A Case of Dislocation of the Humerus from Sneezing.—*Reported by P. H. Garritson, M.D., Macomb, Ill.* I was called early one morning to see John H., a carpenter by trade, aged forty-two, who, while combing his hair, preparing for breakfast, suddenly sneezed and dislocated the head of the humerus into the axilla. By grasping the arm close up to the axilla with my left hand, and with my right manipulating the elbow, I succeeded, with but little difficulty, in reducing the dislocation. The after treatment consisted simply in supporting the arm in a sling for a few days.

Now, the rationale of the dislocation I am not certain that I know, but the reader may judge for himself. He says he was combing his hair with his right hand, and was holding his left arm nearly on a line with the coracoid process of the scapula. In the act of sneezing we naturally throw the head forward, and the arm at the same time being held in the position he had his, the muscles being relaxed, save sufficient to retain the position, through the involuntary sudden contraction of the deltoid, brachialis anticus and biceps muscles, the elbow will raise and the head of the humerus be correspondingly or proportionately depressed. This we think must have been the cause of the dislocation. Never having heard of a dislocation being produced under such circumstances, I have thought a note of it might not be uninteresting to some of the profession.—*Medical Archives.*

Dr. Neftel, of New York, treats malignant tumors, organic strictures of the urethra, and indurations generally by electrolysis, according to the suggestions of Cassel, Meyer, and others. He says that this plan of treatment is never followed by inflammation, suppuration or other disturbances, and that the patient can continue his usual occupation and mode of life.—*Richmond and Louisville Medical Journal.*

Professor Langenbeck and Professor Bardleben, of Berlin, speak most highly of Professor Lister's antiseptic dressing of wounds.

Medical Miscellany.

We are pleased to note that the translation by Dr. Tuck of an article on Poisoning from external Application of Mercurial Ointment, and which appeared in our issue of March 24th, was considered worthy of republication by our cotemporary in Oregon; but we look in vain for a proper recognition of the source from which it was obtained by that journal.

Prof. Syme, of Edinburgh, died in that city, on the 27th ult., of paralysis.

Injections of Liqueur de Villate in Carious Bone.—M. Nélaton employs the following modification of the *liqueur de Villate* as an injection to be thrown into the fistulous tracts connected with carious bone. Acetic acid 100, sulphate of copper and sulphate of zinc of each 10, and acetate of lead 5 parts. There is a considerable precipitate, so that the solution requires shaking before employing it.—*Union Méd.*, May 31.

Dr. Lougheed, of the 21st Fusileers, has received a gold medal from the Chinese Government, through Colonel Gordon, C.B., R.E. It is mentioned that he had medical charge of a Chinese army, 40,000 strong, and ranked second in command of the Franco-Chinese Contingent. He was present, it is added, at no less than fifty engagements, and at the capture of twelve walled cities.—*Med. Times and Gazette.*

New Poison Bottle.—Messrs. Lynch & Co., 171a Aldersgate street, have brought out a new poison bottle, which seems to us to be quite satisfactory. In appearance it does not differ from ordinary bottles, except that it is studded with perpendicular rows of knobs, so closely set that it would be impossible to seize the bottle in the dark without at once becoming aware of the fact. —*Ibid.*

Disease of the Stomach.—Dr. Wilks says that in cases of persistent vomiting, accompanied by hæmatemesis, it is necessary to ascertain whether the food comes up immediately or after it has passed into and remained some time in the stomach. In the former case, there may be some contraction of the œsophagus; in the latter there is a probability of the stomach being diseased either with cancer or ulcerated. In cases of gastric ulcer hæmatemesis may be slight or severe; when arising from disease of the liver it is always excessive. He looks with disfavor on the plan of passing bougies for the treatment of œsophageal diseases from morbid deposit, since the contraction of the tube from this cause is not at all analogous to that of stricture of the urethra. —*The Medical Press and Circular.*

Quadruplets.—Dr. R. H. Tarlton, of Martinsville, Ind., communicates a case of quadruplets occurring in his practice. Pregnancy had continued seven months, when labor set in and was rapidly accomplished; three vertex presentations and one footling; three females and one male; all delivered alive, but they soon died. There were two placentas. The mother made a good recovery.—*The Am. Practitioner.*

Metric Weights and Measures.—We learn through the *Chemist and Druggist*, that at a meeting of the "International Decimal Association," held at the rooms of the Society of Arts, Sir Charles Adderly, M.P., moved the following resolution: "That the great inconvenience to agriculture, manufactures and commerce, as well as to science, resulting from the numerous complicated and anomalous weights and measures now in use, whether by law or custom, in the British empire, demands the attention of the Legislature at the earliest practical time, with a view to the establishment of some convenient uniform decimal system throughout the United Kingdom." Which resolution was carried, but two speakers being in the negative. One of these, however, was Prof. Airey, the Astronomer-Royal, who spoke in favor of the English weights and measures as more useful in practice from their ready subdivision by halving and quartering. They also recommended the substitution of metrical for troy weights, it having been recommended to abolish the latter by the Standard Commissioners, and thus make an entering wedge to their general introduction. —*American Journal of Pharmacy.*

To Correspondents.—Communications accepted:—Case of Monstrosity with Transposition of Thoracic and Abdominal Organs—Case of Poisoning by Worm Lozenges.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending July 9, 1870.

Cities and towns	Number of deaths in each place.	—Prevalent Diseases— Con-sumption.	Cholera Infantum.
Boston	101	10	6
Charlestown	6	1	0
Worcester	20	1	2
Lowell	21	3	5
Milford	5	1	0
Chelsea	4	2	0
Cambridge	21	3	0
Salem	4	1	0
Lawrence	4	1	1
Springfield	11	1	6
Lynn	10	3	5
Gloucester	9	1	0
Fitchburg	2	0	0
Taunton	2	0	0
Newburyport	1	0	0
Fall River	7	1	1
Haverhill	1	0	1
	229	29	27

Worcester reports two deaths from smallpox. From all the above named places there are reported thirteen deaths from dysentery and diarrhœa, five from scarlet fever, five from measles, five from typhoid fever, six from pneumonia, and four from cholera morbus.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending July 9th, 101. Males 47—Females 54.—Accident, 4—apoplexy, 1—disease of the brain, 3—inflammation of the brain, 2—bronchitis, 2—burns, 1—cancer, 1—cholera infantum, 6—consumption, 11—convulsions, 4—debility, 5—diarrhœa, 10—diphtheria, 1—dropsy, 1—do. of brain, 4—dysentery, 1—scarlet fever, 4—typhoid fever, 2—gastritis, 1—hæmorrhage, 1—disease of the heart, 1—intemperance, 3—disease of the kidneys, 2—disease of the liver, 1—congestion of the lungs, 2—inflammation of the lungs, 3—measles, 2—old age, 2—paralysis, 3—peritonitis, 2—pleurisy, 1—premature birth, 3—prostatitis, 1—puerperal disease, 1—purpura, 1—scrofula, 1—strangulation, 1—suicide, 2—syphilis, 1—inflammation of the throat, 1—unknown, 2.

Under 5 years of age, 50—between 5 and 20 years, 9—between 20 and 40 years, 18—between 40 and 60 years, 10—above 60 years, 14. Born in the United States, 74—Ireland, 18—other places, 9.

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Original Communications.

OVARITIS.

Extract from Lectures delivered in 1869 at the Hôpital de la Pitié, in Paris, by Dr. T. Gallard.
Translated by W. L. Richardson, M.D., Boston.

The important physiological functions of the ovary are to-day so well known, that no one hesitates to consider that organ as the essential part, the actual centre of the female generative system. All the diseases which can attack that organ, must exercise therefore a great influence, not only on the uterus and its appendages, but also on the whole organism. Nevertheless the diseases of the ovaries are, perhaps, less studied, and certainly less understood, than all the others which come under our observation.

In chronic ovarian diseases, it is the history of their beginnings which is so little known, for we cannot always, in studying them, trace them back to their origin, and thus state with precision the phenomena which accompanied their first appearance. In many cases, it is true, we can ask whether they are not the result of a primary acute stage, and especially of a stage of inflammation. Now an acute inflammation of the ovary, or ovaritis, is to many pathologists a myth which they have not observed, and of which they have given the description either from their own ideas of what it should be, or else have adopted unchanged that which others have written on the same subject.

This explains to you why, instead of the clear and distinct records, which your readings leave in your mind when they relate to a point of science which has been clearly elucidated, you only find uncertainty and confusion, if you attempt to recall what you have read on the subject of inflammation of the ovary.

The cause of this confusion and uncertainty is two-fold. First, the almost universal habit of embracing in one description those inflammatory diseases which follow delivery with those which occur as the result of the presence of some form of "*puerperal fever.*" It is true there is inflammation in both cases, but, clinically speaking, there is the same difference between the metritis or ovaritis of puerperal fever, on the one hand, and simple metritis or ovaritis, on the other, as there is between erysipelatous inflammations or traumatic erysipelas which occurs in surgical wards, under certain epidemic influences, and the slight and mild erysipelas, such, for example, as of the face, so often seen in the practice of medicine. This is a radical difference, and it should cause us to describe separately, as two perfectly distinct diseases, these two affections which have neither the same origin, progress, symptoms, nor usual termination.

The second cause of our uncertainty and doubt concerning the history of diseases of the ovary, is owing to the fact that these diseases are so closely connected with those of neighboring organs that it is not only very difficult in a clinic to distinguish them apart, but practically we shall find them as a rule co-existing in the same patient.

Since inflammation of the Fallopian tube almost necessarily accompanies, in the great majority of cases, the inflammation of the ovary, and since the latter is almost an inevitable complication of peri-uterine inflammation or circumscribed pelvic peritonitis, it follows that before the time when these peri-uterine inflammations were recognized and described, all those diseases which were observed were considered as having sprung from the ovaries, while, by a sort of mutual exchange, many cases of ovaritis, observed since then, have been described among cases of pelvic peritonitis or peri-uterine inflammations.

These peri-uterine inflammations are in many cases composed of inflammations of the peri-uterine cellular tissue, of the pelvic peritoneum, of the ovary, of the Fallopian tube, indeed, even in certain cases, of the uterus itself, without our being able to state absolutely which tissue was first affected, or which is the most inflamed.

However, besides these complex cases, there are many more simple, in which the inflammation is limited to only one of the parts I have just enumerated. After a careful analysis of many cases which have passed under my notice during the last fourteen years, I think I need no longer hesitate to separate ovaritis from other peri-uterine inflammations in those cases, comparatively rare, where it occurs isolated and uncomplicated.

As an example of this disease, allow me to call your attention to a patient at present in the hospital.

This woman, thirty-two years of age, and of an apparently vigorous constitution, although we have found in the lungs some well-marked signs of tuberculosis, complains of a tolerably severe pain in the abdomen, especially in the left iliac region. Turning our attention to that spot, we see in the first place that the general outline of the abdomen is unaltered; there is neither swelling nor distention. The coils of the intestines are not to be felt under the skin. The skin is not hot. The abdomen is flaccid, and palpation, exercised carefully, does not cause the patient to complain of pain. In order to render the examination painful, it is necessary to use considerable pressure, so that the fingers may penetrate deeply into the pelvic cavity. This manœuvre, although it discovers no tumor, yet causes pretty acute pain at a point a little anterior to the centre of an oblique line drawn from the anterior superior spine of the ilium to the symphysis pubis. At that point, and just where the pain is located, we feel a certain degree of resistance to the finger, but *there is no distinct tumor*. Observe in passing that it cannot be a neuralgic pain, for it is too deeply seated for that, and, besides, a careful examination shows the absence of the tender spots so characteristic of abdominal neuralgia.

Do we obtain any further information by a vaginal examination? The vagina is moderately warm, without dryness, and free from any profuse discharge. The cervix is directed forwards, partially open, disclosing a transverse slit, as is the case with all women who have borne children. It is flexible, soft to the touch, and presents no superficial alteration. The body of the uterus is slightly retroverted. The vaginal cul-de-sacs are soft and yielding, with the exception of that on the left side. There the finger, passed in to a considerable distance and a little backwards, reaches a small tumor, which easily glides away, and which is exquisitely tender to the slightest touch. This little tumor, apparently about the size of an almond, flies so easily from under the finger that it is impossible to determine either its size or outline. If, however, we combine abdominal palpation with the vaginal examination, we shall succeed in fixing it more firmly by resting it on the exploring finger, which then ascertains that it is smooth, round, or rather oval; that it is in some way attached and parallel to the long axis of the uterus. Finally, the rectal exploration comes to complete our information. This is done by grasping the tumor between two fingers introduced, the one in the vagina the other in the rectum, and we then feel that it still eludes the grasp—like some round, slippery body, a cherry-stone or marble, for instance, and this exploration causes at its highest point that exquisitely sensitive pain which calls forth at each new touch a cry from the patient, and which well deserves the qualification of exquisite (*la qualification d'exquise*). Arterial pulsation can be detected neither in the tumor nor its neighborhood.

It is a question, in the first place, whether we have to do with a simple neuralgia; and observe in this connection that the absence of all tender spots has at once eliminated this explanation, which was moreover at once set aside when we placed our finger on such a morbid lesion as a tumor. Again, the pain is not caused by deep pressure, and if there was reason to think it was due to inflammation, it is not a case of peritonitis, for in that disease the pain becomes acute on the slightest pressure, and does not allow of a deep exploration, such as we have been able to exercise in this case. Is it a case of inflammation of the uterus or of the peri-uterine tissue? In regard to the former, we know that the pain in metritis is lancinating, deep-seated, increased by pressure on the diseased organ, and, furthermore, that it is situated in the median line. In this case the pain is lateral, uninfluenced by pressure exercised on the uterus or by movements of that organ, unless indeed we try to rest the body of the uterus on the tumor, which is situated along its left border.

There yet remains to be considered peri-uterine inflammations. It is true that certain observers have believed it possible to find a slight aid for a differential diagnosis in the exquisite pain which they believe to be peculiar to this disease. Apart from this pain, however, there are other symptoms which may cause us to lay aside the idea of peri-uterine inflammation. In that disease there is more heat of the vagina, more swelling of the tissues, which present, although hard and resisting, a sort of œdematous appearance. The tumor is fixed, so that it not only remains under the finger adherent to the neighboring tissues, but also causes them to adhere to each other, so that the uterus instead of being, as is usual, moveable, becomes encased as it were between the inflamed tissues; finally, the tumor projects into the vagina, becoming prominent either through the entire length of the os tincæ or towards one cul-de-sac, which it obliterates, presenting then at its surface arterial pulsation.

There now only remain two organs in which we can locate the inflammation—the Fallopian tubes, and the ovaries. The symptoms which we have thus far described, are insufficient to enable us to say whether we have to deal with ovaritis rather than with salpingitis, or even with that which is much more common, namely, a salpingito-ovaritis, a name applied to an inflammation appearing simultaneously in both organs. This question, which, even after a physical examination, remains unsettled, will perhaps be at once determined when we have taken into account the functional derangements of which I have thus far purposely avoided all mention.

The patient is, as I have said, thirty-two years of age, or in other words, in the full activity of the generative organs. She has four times been pregnant. These pregnancies have all terminated regularly at full term, and the last one was finished about five years ago, without any resulting accident. The catamenia first appeared when she was thirteen years of age, and have always since been regular, with the exception of some slight irregularity some years since, following the death of one of her children. At that time there was a premature arrest of menstruation, but no further trouble, and the next month the catamenia returned as usual. I would add that menstruation was never painful, and that, during the intervals, leucorrhœa never, as a rule, existed. It was at the close of November that we find the beginning of the disease from which she is now suffering. The catamenia appeared as usual on the 20th of November, but, instead of lasting as usual five days, the discharge continued for nine, leaving behind a malaise, fatigue, a feeling of exhaustion, swelling of the abdomen, anorexia, and constant pain in the lumbar region. This condition lasted a few days, at the end of which an actual metrorrhagia ensued. This made its appearance on the fifth of December, lasted fifteen days, and then gave way to a profuse leucorrhœa. During the course of the hæmorrhage there were bearing-down efforts, accompanied by uterine pains, compared by the patient to those which follow labor for the expulsion of the placenta. The blood discharged was sometimes liquid, sometimes clotted. After this sanguineous discharge ceased, the abdomen, which had become very painful, especially on a line with the left iliac fossa, remained slightly tender and sensitive. The least pressure produced pain, which was also strongly marked in walking, so long as that motion was possible. There was never vomiting, but frequent nausea, with a slight diarrhœa during the hæmorrhage. Anorexia, thirst, and a well marked febrile excitement were constantly present. Some fresh hæmorrhages appearing at the close of December and the beginning of January, started up afresh all the symptoms, which had never wholly disappeared, and which returned again with increased severity about the 20th of June, this being the regular period for the return of the catamenia.

This group of symptoms agrees too perfectly with the data furnished us by our previous examination, for the diagnosis to remain any longer doubtful. According to the seat of the pain and the swelling, we were led to consider that it pointed to a disease of the internal organs of generation, the choice lying between a disease of the Fallopian tube and one of the ovary. The general condition, and especially the febrile symptoms, show us that the disease is of an inflammatory nature. Moreover, the menstrual disturbance is too great for us not to perceive that the ovary is interested. So then, with or without inflammation of the Fallopian tube, there is an inflammation of the ovary—an ovaritis—which, on account of the comparatively recent date (two months), must be called acute ovaritis.

Two principal causes—the one predisposing, the other exciting—have led, by most manifest influences, to the development of the disease in this case. The predisposing cause is the phthisical diathesis to which the patient, notwithstanding her apparently healthy condition, is subject. Its first manifestations, consisting in hemoptysis, cough and night sweats, have preceded by some weeks the advent of the ovaritis.

As to the exciting cause, its action is

not so evident, and it presents this remarkable feature, that it existed without producing any injurious effect on the health so long as the organism retained its natural powers of resistance; but it became at once hurtful when this power of resistance had been broken down by the invasion of phthisis. The predisposing cause in this case I have found to be the occupation of the patient, who is employed in working a sewing machine. Now, while I must say that I have seen women working with a sewing machine without its proving the least injurious—principally, however, those who do not confine themselves assiduously or constantly to that work—I have also ascertained some morbid effects which arise *from no other cause.* I remember two young women, sisters, who, in consequence of the prolonged use of the sewing machine, were made sick, the one with metritis, the other with a very rapid development of an ovarian tumor. In these two apparently dissimilar cases, two different diseases sprang from the same cause, which had produced in each a congested state of the inter-pelvic ovaries. It is in fact by the production of a permanent congested state of the generative system that the use of the sewing machine brings about the most injurious and most undeniable morbid effects.

This is proved by the fact that women who work sewing machines with only one pedal, do not experience any other effect than the fatigue resulting from their sitting for a long time in a constrained position. Of course chlorosis, with its various sequelæ, rachialgia, palpitation, &c., is common with women who are obliged to work these machines continuously; although diseases of the generative organs do not occur oftener in these cases than with those who follow any other sedative employment. It is well known that a sitting position is one of the causes of inflammation of the generative organs, since it favors a stasis of blood in the pelvic organs.

If, however, the machine with one pedal has no other inconvenience, and if perhaps it is perfectly harmless for a person who uses it occasionally, and then only for a short time, the case is not the same with the machine with two pedals. This last causes not only fatigue, but also a well-marked excitement of the generative organs, resulting from the friction and irritation of the vulva by the alternate movement of raising and dropping the legs. This titillation, which extends from the labia to the clitoris, and which lasts as long as the machine is in operation, causes a state of permanent erethism of the whole generative system.

The patient, of whom we are now speaking, is a case to the point, and she gives us information on this subject which excludes all chance of doubt; for sometimes she works with a single and sometimes with a double pedal, the latter being used for coarser and thicker materials. Now while the former does not produce any injurious effect, the latter always gives rise to the state of excitement to which I have alluded. I should add that she had used the double-pedal machine for eight or ten days just before the symptoms of acute ovaritis appeared from which she is now suffering.

In this particular case, the weakening or predisposing cause was phthisis; in another case it may be some other diathesis, or chlorosis, or a deficiency of nutrition, an unhealthy place of abode, or any other bad hygienic condition which weakens the patient. Among these causes we must not forget to mention the fatigues to which fashionable ladies are exposed by mingling in the dissipations of the times, and which may act both as a predisposing and exciting cause.

Does now this exciting cause act by producing an unusual congestion of the generative system, and consequently ovaritis? In this case the congestive excitement was produced by the mechanical action of a sewing machine, in other cases by a too great indulgence in the voluptuous pleasures of life. In other cases it is a physiological action, the effect of which may be exaggerated or disturbed by various causes. You well know that, at each menstrual period, a considerable determination of blood towards the ovaries takes place, which are congested and swollen at the moment when the Graafian vesicle bursts in order to allow the ovum, which has arrived at maturity, to escape. Imagine this physiological congestion carried a step further, and you have inflammation, of which the congestion was only the first stage. This explains why the advent of ovaritis is almost always to be traced to a menstrual period and not to a preceding delivery, the latter usually giving rise to metritis or other peri-uterine diseases; and why also ovaritis, although capable of showing itself during the whole of the period of sexual activity, is usually the disease of young girls or young married women. Finally, you will understand how any disturbance, occurring at the menstrual period, and especially how the sudden arrest of the catamenia, in consequence perhaps of some mental emotion or some exposure to cold, how any fatigue or injury, though slight, received during this period, may, by increasing the ovarian congestion, be occasionally the cause of ovaritis.

The inflammation of the ovary is so closely bound up with the physiological congestion of that organ that one never meets with a case of it occurring beyond the period of sexual activity—a period which begins with the first menstruation and which ends with the cessation of the catamenia—during which time a periodical congestion of the ovaries takes place. This explains why you do not see examples of ovaritis occurring in young girls before the age of puberty, or in old women who have passed the climacteric period of life.

The opportunities for a *post-mortem* examination of an inflamed ovary, except as it occurs during the course of puerperal fever, are rare, and it has so happened that those pathologists, who have accidentally come across this lesion, have always been ignorant of the symptoms observed during the life of the persons whose bodies they were examining. It is on these accounts that I am obliged to confess that between the symptoms and morbid lesions of ovaritis there exists a gap which has yet to be filled before the history of the disease is complete.

In place, therefore, of an anatomical picture, which I regret I cannot place before you, allow me to read the following account of an inflamed ovary which Dr. Scanzoni met in the body of a patient who had died of pneumonia, and which he thus describes :

"The autopsy showed in the pelvis, to the right of the uterus, a mass of coagulated fibrine of the size of the fist, easily separated from the adjacent organs, and evidently the result of an effusion. Removing this, we came upon the ovary, which had a longitudinal diameter of 2·16 inches, a transverse diameter of 1·57 inches and a thickness of about 1·37 inches. Its form was oval, and its size was considerably enlarged, as is shown by the measurements. Its surface was of a bluish-violet color, covered by numerous distended veins, and towards the interior angle of the posterior surface could be detected by its reddish-black color the spot where a Graafian vesicle had ruptured only a short time before. The consistency of the organ was soft, in some parts almost fluctuating. On cutting into it there escaped a considerable amount of blood, and the section presented the same violet color and also some greatly distended veins. The vesicle just alluded to, as showing so clearly where a rupture had recently taken place, was about the size of a pea. It still retained in its centre a small quantity of black liquid blood, while its sides were coated by a tolerably thick lining of fibrine. Two neighboring vesicles presented nearly the same measurements to the eye, and caused a slight protuberance on the surface of the ovary. On opening them, a fluid composed of blood and serum was pressed out. Towards the other extremity of the organ where the congestion was less marked, the section less red, and the consistency firmer, an abscess was discovered in the parenchyma itself, about the size of a bean, and containing pus mixed with blood. Behind this somewhat large abscess other smaller ones were discovered, whose size varied from that of a millet seed up to that of a small pea. These were situated deep in the parenchyma, and all contained more or less blood and pus. The entire tissue was infiltrated with serum, and most of the vesicles were perceptibly enlarged by a too copious accumulation of fluid.

"The pathological changes here found perfectly correspond to the picture which writers have drawn of acute ovaritis : considerable increase in the size of the organ, well marked congestion, traces of effusion in the vesicles, purulent points in the parenchyma and fibrinous exudations into the peritoneal covering of the organ."

You observe that here the alterations were three-fold, or, in other words, that they affected the three tissues which enter into the constitution of the ovary, namely, the vesicle, the parenchyma, and the outside covering.

Some writers have thought that, instead of invading these three tissues simultaneously, the inflammation might affect each of them separately, and they have attempted, with this idea in view, to describe three kinds of ovaritis which, according to their theories, might exist, viz., follicular, parenchymatous, and peritoneal. For my part, I very much doubt whether this is possible, and whether the inflammation can exist in one of the tissues without the others sympathizing ; unless, perhaps, with the exception of an inflammation of the serous envelope, which might certainly attack the surface of the ovary without penetrating to the depth of the parenchyma, but which would however spread with great violence over a large expanse of peritoneum. A more practical division of the subject would be one which consisted in admitting, with the majority of pathologists, four degrees in the intensity of the inflammation of the ovary.

1st. *Congestion*, consisting of a simple enlargement with an increased vascularity of the organ.

2d. *Red Softening.* When the disease has reached this stage, the organ is larger than normal, and moreover infiltrated with serum, thus becoming friable, and in its interior we shall find one or more apoplectic spots.

3d. *Suppuration.* This stage embraces induration, increase of volume, and friability of tissue, as in the preceding case, with this difference, however, that the apoplectic spots are replaced by purulent points, which are usually to be found within the vesicles of which Négrier has cited many examples, but they may also occur in the parenchyma, as was mentioned in the case of Dr. Scanzoni, which I read to you.

4th. *Gray Softening, ending in Gangrene.* This condition is only met with in women who have died after delivery.

Of these four forms of inflammation of the ovary, we shall necessarily omit the last, since it belongs to a different disease from that which we are now considering—namely, to the ovaritis of puerperal fever. This statement is proved by the fact that it only occurs in those women who are attacked with ovaritis a short time after delivery, and it is never met with in those cases where ovarian disease has attacked a person under other circumstances.

As to the first form, or that of congestion. This state of the ovary is certainly a condition which has anatomically been verified, but always as a physiological condition in those women who have died a violent death during a menstrual period, and who, in every other particular, had been considered as enjoying the best of health. On the other hand, common sense admits certainly that, in the tissue of the ovary, as well as in all the other tissues of the body, congestion may be the first stage of inflammation; but in the case of the ovary a physiological congestion is often very closely connected in some way with a morbid one, so that it is absolutely impossible to say, looked at from an anatomical or clinical point of view, where the one ends and the other begins. From what has been said, then, it appears that, of these four degrees of ovarian inflammation, only two possess really any interest, and constitute, properly speaking, the pathological anatomy of ovaritis: these are the second, *red softening*; and the third, *suppuration* or *gray softening*. These two degrees represent, in the case of the ovary, two conditions exactly identical with those which in pneumonia are represented by the states known as red and gray hapatizations. Bear in mind that these two conditions are the only ones which are proved to exist, according to the researches of morbid anatomists, and which are often met with occurring simultaneously, as in the case of Dr. Scanzoni.

Pathological anatomy teaches us that the isolated inflammation of this organ is an exceedingly rare occurrence. Almost always the inflammation invades simultaneously all the neighboring parts, especially the Fallopian tubes, the pelvic peritoneum, and the peritoneal cellular tissue, more particularly that portion lying in the thickness of the broad ligaments. In these cases, however, we have to deal with a complex disease in which it is difficult to assign to each its part, while at present we have only to speak of ovaritis apart from all complications. Moreover, even in the most simple cases, the peritoneum is always affected, just as the pleura is always slightly inflamed in pneumonia; and it is rare that, when the ovary is inflamed, the Fallopian tube should escape. It is on this account that, even if I have been able already to convince you from certain symptoms that the patient, who has served thus far to illustrate these lectures, presented no complication of peritonitis or peri-uterine inflammation, still it was not possible to affirm that she did not have an inflammation of the Fallopian tube at the same time with the ovary, and I am therefore forced in this case to incline towards the belief in the existence of two inflammations, a fact which pathology shows is usually the case.

I shall now attempt to describe briefly the symptoms and progress of ovaritis.

The accession of the disease is, according to popular report, sudden, unexpected, acute, and the case rapidly assumes great severity; sometimes, however, it is slow, insidious, appearing like a simple malaise, followed, after a longer or shorter time, by the rapid development of the most alarming symptoms. This is true in the practice of those writers who, in their descriptions, embrace also the ovaritis of puerperal fever; for in this form of the disease alone do we see a sudden invasion of grave symptoms causing the inflammation in a few hours to reach its height. In ordinary ovaritis the course of the disease is, on the contrary, marked by a group of symptoms which frequently pass unnoticed and do not attract the attention even of the patient until the moment when, becoming more unwell, she endeavors to ascertain the cause of the malady under which she is suffering. This is in fact one peculiarity which of itself seems to allow us to easily distinguish ovaritis from other peri-uterine diseases.

The first thing, which often attracts the attention of the patient, occurs during the catamenial period which is always disturbed by an attack of ovaritis. Very often there is metrorrhagia, but it is not rare to find amenorrhœa, or only an irregularity consisting in an alternation of menorrhagia and total suppression of the catemenia. At this very moment we have a young girl in the hospital who is affected by double ovaritis and who, after a suppression of the catamenia for some months, was attacked with metrorrhagia which was with difficulty arrested. In all these cases there is pain in the region of the ovary during the menstrual period. This dysmenorrhagic pain, so common with young girls, did not escape the notice of Aran, and, having noticed that it was present in those cases in which he so often observed the formation of clots in the interior of the ovarian vesicles, he was led to consider these clots and the yellow bodies which follow them as alterations dependent on ovarian inflammation. I do not know, as I have already told you, how we shall ever obtain an opportunity for an ocular demonstration of this; but I agree with him in this statement that ovaritis is more common with young girls than is generally believed, and I find the proof of this, not in the ovaries themselves, but, laying that organ aside, in the peritoneal plastic adhesions, which are so frequently shown us at autopsies, lying in the neighborhood of the ovaries and Fallopian tubes.

The pain which thus clearly marks the access of the disease, sometimes increases with the severity of the other symptoms, till it reaches with them a degree of intensity admitting no longer of any doubt as to the existince of a disease requiring immediate attention. This has been the course of events with our patient, in whom the attack of ovaritis may be considered as progressing somewhat rapidly.

Usually, however, the symptoms succeed one another more slowly. The pain, which was severe during the catamenial period, and which extended about the loins, is mitigated, without, however, entirely disappearing during the interval which follows the cessation of the catamenia. It was acute, it remains dull, at times lancinating, in other words it seems like a permanent feeling of uneasiness, with, however, an occasional sharp piercing exacerbation appearing especially as the result of any violent exercise or unusual fatigue. The patient continues pale, depressed, languid; a dark circle appears about the eyes; she suffers from an irregular febrile movement, especially marked towards evening. The appetite is wanting, or appears capricious. Her behavior is peculiar. She experiences an indescribable malaise which gives way to a fresh attack of pain at every menstrual period, only to leave her in the same languid, depressed state during the succeeding interval. At length the fever becomes more marked and the pain increases till it becomes insupportable. It has been said that the walls of the iliac fossa become the seat of an excessively painful tenderness, and that the walls are tense and swollen. In the case of the four patients in the hospital now suffering from this disease, you can see that this is not so. Though the iliac fossa is painful it is only so deep down, and then only after considerable pressure has been exerted over the region of the ovary. As for abdominal tension, there is none. You will scarcely find any resistance to palpation and only elevation of temperature such as is met with in metritis and peri-uterine inflammation. Vomiting has been curiously exaggerated as a symptom. If you occasionally meet with cases where there is profuse vomiting of a greenish-black or blackish substance, remember that this symptom belongs only to peritonitis, which always accompanies ovaritis and which may sometimes spread and indeed become the principal disease; this is a very rare occurrence, however, and you meet at the outset, during an attack of ovaritis, only a sympathetic nausea and vomiting, slightly persistent but consisting not of bile, but only alimentary substances or else mere glairy mucus.

The symptoms manifested in the neighboring organs, during an attack, are of slight importance, from the fact that the tumor, resulting from the inflammation, is of a slight size. The result is that it exercises but slight compression, sometimes on the rectum or bladder, sometimes on the branches of the sacral plexus, and, as a result, we find occasionally dysuria, constipation or diarrhœa, rectal or vesical tenesmus, or trouble in walking; yet all of these are less marked, during the progress of ovaritis, than during any other of the peri-uterine inflammations.

The size of the tumor is so small that often it escapes the most careful examination. Scanzoni asserts that we cannot detect it through the abdominal or vaginal walls in those cases where a peritoneal false membrane of some thickness envelopes the inflamed ovary. I cannot entirely coincide in this opinion. In cases, for example, where the tumor is as large as Scanzoni himself has reported in the case which I just quoted, there would be no difficulty in recognizing the increase in the size of the ovary, even though it was covered with thick false membrane.

There is one reason why an inflamed ovary, although difficult of access, is yet more accessible to our touch than it is when in a perfect state of health, and this is because on account of its situation and weight it has a tendency to fall back from the body of the uterus and to draw also the latter with it, thus in reality giving rise to a retroversion. In the case of one of our patients, the uterus is retroverted to such a degree that the cervix is discovered directly behind the pubes, the body occupying the hollow of the sacrum. This falling of the inflamed ovary back towards the posterior peritoneal cul-de-sac, which is usually the rule in these cases, although there are many exceptions, was first noticed by Dr. Rigby, who has clearly pointed out that this displacement is owing to the increase in size and weight resulting from inflammation.

Although, on account of the excess of weight which it has gained, its tendency is to fall into the peritoneal cul-de-sac, yet its descent is arrested by the suspensory ligament which binds it to the uterus; and it even descends the less because the suspensory ligament, instead of stretching, seems to contract under the influence of the inflammation with which the ovary is attacked. Observe how this is brought about. The ovary in enlarging increases its volume excentrically, in accordance with its diameters; but the external extremity remains fixed at the point it already occupies. The result is that the internal extremity approaches the uterine cornua by insinuating itself into the thickness of the ovarian ligament, and thus the length of the latter is diminished. This phenomenon, which has been carefully observed and described by Aran, explains to us why the inflamed ovary, although it descends lower than the healthy ovary does, yet never falls into the floor of the posterior peritoneal cul-de-sac, which, you are aware, reaches very low down between the cervix and rectum, and why, instead of being able to touch some resisting body where it could lie, it constantly weighs upon the uterus, and by gradually tilting it further back at length drags that also down.

Tumors situated in the recto-vaginal wall, or at the base of the broad ligament, remain always fixed in the place they occupy, while tumors formed by the ovary itself often escape from under the finger which presses upon them. This peculiarity has for us a double value; first, because it allows us to recognize the fact that the tumor is situated within the peritoneum; and second, because it shows us that it is not kept in place by numerous and resisting adhesions. Sometimes, it is true, neither the vaginal nor rectal examination, nor even both combined, allow us to reach the inflamed ovary. In these cases it is necessary to have resort at the same time to external palpation, and, applying the open hand in the iliac fossa, to force back the organs of the true pelvis till they are brought in contact with the finger introduced into the vagina and rectum. We can then, by following the outline of the ovary, better understand it and better estimate the amount of tenderness of which it is the seat.

I must not fail to call your attention to the very marked predilection which the inflammation shows in favor of the left ovary. This is so great that, in the sum total of forty-three cases described in the writings of Dr. Chéreau, we find twenty-five were of the left ovary and only eleven of the right, while four were affected both at once, and in three cases the exact seat of the disease is not mentioned. In our four cases, this proportion is even greater, for in three cases the left ovary is attacked and in the remaining case both are diseased, that on the right having been first inflamed. Writers have endeavored to explain the frequency of this disease in the left ovary in comparison to that in the right by the compression which the sigmoid flexure of the colon exercises on the ovarian veins of that side, a compression rendered the more powerful when the intestines are habitually filled with fœcal matter, constipation being as a rule an accompanying symptom of ovaritis. But, if this is the case, then the constipation should cease to be considered as a symptom, and should be classed among the predisposing causes of the disease. Again, writers have alluded to the frequency of the left occipito-cotyloid position of the fœtus during pregnancy, and to the consequent pressure which the head of the child must exert on the organs in the true pelvis; but, during gestation, the ovary is situated too high up not to escape from this compression, and moreover the frequency of ovaritis in the left side is as marked in young unmarried girls as it is in those who have had children.

(To be continued.)

CASE OF POISONING BY BELLADONNA.

By E. P. Hurd, M.D., Newburyport.

The following case of belladonna poisoning may be of interest to your readers, as illustrating the necessity of caution in using the alkaloid atropia, even within the prescribed limits.

On Saturday, May 28th, at 8½, A.M., I was called to see Mr. F., suffering from chronic sciatica. Patient very feeble; has been bed-ridden for some months. More than usual pain the previous night, and no sleep. I had been in the habit of using hypodermic injections of morphia, one fourth of a grain, as an anodyne. The usual disagreeable after-effects of opium ingestion invariably followed. I resolved on this occasion to substitute atropia, taking a hint from a recent therapeutical work. Two nights before, I had injected about the fiftieth of a grain into the arm, and with, as I fancied, a decidedly calmative effect, although the patient was obliged to resort to a Dover's powder (10 grs.) during the night.

I prepared a solution of the following strength:—Atropia, gr. one seventh, ad aquæ ʒij: *this making just seven syringefuls*. One syringeful (one forty-ninth gr.) was injected. On withdrawing the point of the syringe several drops of blood oozed forth, showing that I had penetrated a vein.

At 10 o'clock I was summoned in great haste. Mr. F. was in much distress. Face flushed, head hot, pupils dilated, delirium, restlessness, dry tongue and fauces, dysphagia, quick pulse, fever. He kept exclaiming, "O my back, my hips!" Family alarmed. My first procedure was to reassure the family. Morphia was administered. Ordered the mouth to be kept moist with lemonade; cold to the head, and sinapisms to the feet, which were cold.

Repeated visit at 2, P.M. Febrile reaction had subsided, and the condition was one of prostration. Pulse slow and feeble. Delirium rather of the low muttering character. Answers questions in monosyllables, and immediately relapses into the delirium. Picks at bedclothes, grasps at imaginary objects. Pupils large as pistol bullets; vision dim. Mouth parched. Says that he is in no pain. Restless. Feet and legs cold: the coldness extends to his hips. Head still hot.

Treatment.—Essence of beef every half hour. Carb. ammonia, with spts. lavender. Hot bottles to feet, and the entire lower extremities to be enveloped in warm flannels, over which a hot flat-iron to be assiduously applied.

4, P.M.—Patient has rallied. Temperature and pulse becoming natural. Less delirium. Has passed urine. Prescribed beef-tea and milk, the carb. ammonia to be occasionally administered.

Sunday, A.M.—Found my patient every way improved. Quite rational. Effects of the atropia nearly passed off. Pupils natural. Dim recollection of the events of the previous day; all seemed like a confused dream to him.

From the above experience of the effect of the internal administration of atropia, I judge that it is not always a safe or a reliable remedy. I could not have anticipated such unpleasant effects from so small a dose. Late authorities have given, hypodermically, as much as one twenty-fifth of a grain. I am not certain that one twenty-fifth of a grain would not have killed my patient!

It was stated, in the above report, that several drops of blood exuded on withdrawing the point of the syringe. Could I have thrown the solution into a vein, and could this account for the unpleasant toxic effects; the drug being carried directly, in the venous blood, to the heart and thence to the brain? This is the explanation of one of my *confrères* to whom I stated the case. It is certainly singular that the same dose on a former occasion should have affected my patient so slightly.

I am not disposed ever to repeat the same dose again. In fact, I intend to be careful in my use of atropia, in whatever way administered.

June 1st, 1870.

POISONING BY ACONITE. RECOVERY. PROBABLE ANTAGONISM BETWEEN OPIUM AND ACONITE.

By H. W. Brown, M.D., Hubbardston, Mich.

Mrs. M——, aged 31, was attacked with urethritis which, she stated, had recurred for the third time in about five years. In the treatment, I at one time prescribed tincture of hyoscyamus (fol.), twenty-five drops every three hours, for the relief of pain.

Saw the patient at 8 o'clock, A.M., Feb. 11, 1870. She was reclining upon her bed, dressed, and reported having had a more comfortable night than she had done for several preceding. Upon a table, among others, was a vial containing about two drachms of fluid extract of aconite (rad.) (Parke & Duffield) which had been used as an external application for the relief of facial neuralgia. I gave my directions to the attendant for the day, and for the exhibition of the hyoscyamus and left the house, but fortunately remained upon the premises in conversation with the husband of the patient. In about half an hour, or a little more, I was summoned into the house by the announcement from the terrified nurse that the lady was dying. Found her "down stairs," in a rocking chair, with a *pallid* countenance, dilated pupil, cold extremities, extremely feeble and slow pulse, alternate relaxation and spasm of the muscular system, respiration very much retarded, subsultus tendinum, or rather wild movements of the arms and hands, and complaining at intervals (a word or two at a time) of intense thirst, severe burning pain in the stomach, vertigo, headache, dryness of the throat, &c.; said she could not swallow, or speak; that the room was quite dark; "I am so numb;" "I can't breathe," &c. I supposed the patient poisoned by belladonna, but was struck with the paleness of the face, and the presence of sensibility. I was about preparing an emetic, when the attendant stated that Mrs. M. had remarked, after taking the first dose of the "drops," that it felt dreadfully in her stomach, and she would not have it there, and had called for a table spoonful of mustard and some warm water, which she had mixed and drank. It did not, however, produce emesis. I administered an emetic, and a slight amount of fluid was evacuated by the mouth. I immediately commenced the exhibition of stimulants and sulphate of morphia, after the following plan. A mixture of two parts of whisky, and one part of water, to which a few drops of the spirits of camphor were added, was given, a teaspoonful every five minutes, or about that, and half a grain of sulphate of morphia every half hour. In addition, stimulant remedies (sinapisms) were applied externally. Free vomiting took place about eleven o'clock. At twelve, there was considerable improvement in the general condition of the patient. I then reduced the dose of the morphia, and gave it at longer intervals. I think there was a manifest improvement after the third dose. Now to state the main point. It appeared, upon examination, that the attendant had given the patient twenty-five drops of fluid extract of aconite, instead of hyoscyamus as directed, by mistake or carelessness, as both vials were plainly marked, and the proper one indicated.

Would twenty-five drops be considered a poisonous dose? The dose is from two to five drops ordinarily. There is doubt in my mind that in this case the termination would have been fatal without treatment. I remained with the patient till six, P.M.; it was two or three days before recovery was complete. The free evacuations of the stomach contributed, doubtless, in a great measure to the recovery, even though it occurred so late.

I am also convinced of the efficacy of the morphia in the case. There is some discussion at the present time as to whether there is an antagonism between opium and belladonna. If so, why not between opium and aconite?

Selected Papers.

ON REDUPLICATION OF HEART SOUNDS.

By Archibald Bleloch, M A. Glasg., Sc. D., Edin.

The nervous supply of the heart is threefold. There are the cardiac branches of the pneumogastric, the sympathetic plexuses appropriated to the supply of the heart, and a system of ganglia in the substance of the organ itself. The function of the cardiac branches of the pneumogastric has been demonstrated to be inhibitory. The function of the sympathetic cardiac nerves is at once motor and sensory. The function of the ganglia in the substance of the organ is supposed to be connected with rhythm and co-ordination.

This extensive nervous supply corresponds with the mechanism of the organ otherwise. The heart is made up of muscular tissue, exactly similar to that of voluntary muscle, and hence it possesses, when healthy, very high contractile power. In addition to this, it is lined by a delicate serous membrane, in contact with which is the warm vital fluid, the blood. The serous lining is supplied with sensory nerves, which must be supposed to communicate with the ganglia in the heart itself, with the sympathetic and spinal nerve centres, and also as furnishing all requisite information for the regulation of the inhibitory action of the pneumogastrics. Now, all irregular action of the heart, palpitations, reduplication of sounds, anæmic murmurs, and such like dynamic conditions, must be referred to some defect in one or other or to several of these elements, which, combined in healthy relationship, make up normal cardiac actions.

It is said that an anæmic state of the blood is the cause of what is termed dynamical murmur and palpitation, but with more reason, this condition of the heart is referred to ischæmia of the cardiac nerve centres, coincident with, or superinduced by the general anæmia. Again, there may be fatty degenerations of the substance of the heart, in which case the contractibility of the muscular structure is impaired, and the vis nervosa, although daily eliminated from the cardiac nerve centres, and conveyed along the nerve tubes to the heart, finds no adequate response, and ultimately no response at all; in which case the patient dies of syncope: not that the cardiac nerve centres are at fault, but the degeneration of the muscular tissue of the organ has reached a point beyond which contractibility is not excited. Syncope from shock is caused by the non-transmission of the vis nervosa. The shock destroys, or rather suspends the eliminating power of the nerve centre

Again, when there is evidence that the two halves of the heart do not act in concert, or when we have a reduplication of the second sound or four sounds instead of two, our attention is directed to the inhibitory and senso-motory nervous apparatus of the heart, rather than to the muscular structure of the organ, or the condition of the blood which it propels. The heart is a double organ, and like all such organs, its two halves are supplied by the nerves appropriate to the opposite sides of the body. No doubt we have cardiac plexuses formed by branches from both pneumogastrics, and from both cords of the sympathetic; and it is reasonable to suppose that these plexuses are arranged by nature to secure the simultaneous action of the two halves of the heart; just as the pulmonary plexuses are arranged to secure the simultaneous action of the two lungs. The nature of a plexus, however, we take to be not so much a crossing of nerve tubes from right to left and from left to right, as a simple intercommunication whereby the vis nervosa for either half the double organ is maintained at a common standard, just as if two rivers from different sources, but running parallel, had intercommunications which kept them always at the same level. And as when some of these intercommunications are stopped, one of the rivers might overflow its banks, while the other was below its ordinary level, so with the vis nervosa transmitted to the opposite sides of the heart. If we suppose the intercommunications established by the cardiac plexuses have become impaired, or inefficient from any cause, the simultaneous action of the two halves of the heart will be rendered uncertain or destroyed. A reduplication of the sounds would occur whenever the vis nervosa on the two sides became unequal.

There is another explanation possible. It has been ascertained by experiment, that the vis nervosa, or nerve energy in man, travels at the rate of 200 feet in a second. It travels at this rate when the nerve tube is in a state of health. If from any cause the nerve tube becomes a less efficient conveyer of vis nervosa, the rate of transmission will be diminished, and a consequent retardation of muscular contraction will result. That such a thing is possible is evident from the fact, that in the frog vis nervosa travels at a slower rate than in man. It travels at the rate of 90 feet in a second, not because vis nervosa is different in the frog from what it is in man, but because the means of transit is less efficient.

A neurosis is a functional derangement of the nerve tissues. While neurosis lasts the nerve centre affected, or the nerve tube affected, does not discharge its function efficiently, that is, it does not discharge its function according to the normal type of nerve tissue in man. There is a retrogression, for the time being, to a lower type of nerve tissue. Both the rate of transmission and the quantity of vis nervosa transmitted, may be less. Now, this neurosis, or functional derangement, is either in the sensory or motor cardiac nerves, and on one or the other side, or on both. When the neurosis exists in the sensory cardiac nerves on one side, the intimation that a sufficient quantity of blood has arrived in the auricles or ventricles, will not be conveyed with equal speed to the motor centres on that side; and the motor vis nervosa will arrive later on the same side. This will be repeated each time, so long as the neurosis continues; the instant of the transmission of the sensory impression being always the same on both sides, because the retarded contractions on the one side necessitate a retarded expansion on the other, auricle for auricle, and ventricle for ventricle. No contraction of the auricles takes place till both auricles are filled; no contraction of the ventricles takes place till both ventricles are filled. The sound side of the heart contracts always first, but invariably waits till its tardy companion comes up for a fresh start. The race is lost and won, and again begun on equal terms continuously.—*Dublin Medical Press and Circular.*

Medical and Surgical Journal.

Boston: Thursday, July 21, 1870.

TETANUS.

At the Société Impériale de Chirurgie, the subject of tetanus was introduced by M. Verneuil, who reported a case of traumatic origin which had recovered under the use of chloral. M. Brown-Séquard was invited to give his views upon that subject. He does not consider it the result of poisoning, as Bilroth thinks, nor a species of septicæmia, which Despres advocates. He agrees with Verneuil that it is the consequence of the increase of the reflex faculty of the cord, due to a peripheric excitation or irritation.

To the objection that chorea, epilepsy, hysteria, &c., may be caused by wounds which at another time give rise to tetanus, and that these different affections cannot be caused by the same increase of reflex faculty of the cord, he replies that this function exists in parts of the cord which differ essentially one from the other; hence it is not surprising that the increase of this faculty in different parts of the cord should produce different phenomena.

Another objection arises from the fact that the phenomena of tetanus appear in one case and not in another. To this, Brown-Séquard replies that a similar variation of results is seen on exposure to cold. One person experiences no injurious effect, another has laryngitis, another tracheitis or bronchitis, others a disease of the lungs, the heart, the intestines, the bladder, the eyes, the ears, &c. We must admit that there is a peculiar individual predisposition which causes the effects of one and the same cause to vary.

It is not then astonishing that in some persons deep contused wounds and serious injuries do not give rise to tetanus; while in others superficial wounds, even wounds already cicatrized, may cause tetanic, epileptic, hysterical or choreic convulsions, and nervous diseases generally.

However, the etiology of tetanus shows that it cannot be considered the result of poisoning.

Spontaneous or idiopathic tetanus, which so often occurs in warm countries, from the influence of exposure to a current of cold air while perspiring, does not have any connection with poisoning. The circumstances in which the disease occurs, and the rapidity of its development, exclude such an idea.

In those cases of tetanus which follow contused wounds, very frequently the disease commences by local phenomena, by the contraction of the muscles in the neighborhood of the wound, by spasm of the masseters, or *trismus;* it is only later that the morbid phenomena extend to the muscles of the neck, the trunk and limbs.

This is not the case in poisoning by the drugs which cause convulsions; the convulsions under these circumstances are universal and synchronous.

The records of medicine contain a great many cases in which the wounding of a nerve, cautery, pricking, contusion, compression, inflammation, &c., complicate the wound, and thus it becomes an evident cause of tetanus. In other cases, tetanus manifests itself after exposing a wound to the action of a current of cold air. Here, again, the irritation of the nerves of the part have been the cause of tetanus without any toxic influence.

Statistics show that complicated wounds of nerves, more or less severe in character, are especially the cause of tetanus. This disease, then, is the result of an irritation of the peripheral nerves, causing an increase of the reflex function of the spinal cord.

If it is objected to this that painless and cicatrized wounds have been followed by tetanus; it is easy to reply that reflex phenomena can be excited by special irritations, even if not painful. Every one knows, for example, that the presence of worms in the intestines very frequently causes convulsive attacks, without any sensation of pain. When, in an epileptic animal, the skin is forcibly pinched in the *epileptic zone*, the epileptic attack does not occur; it takes place if one only tickles the skin or irritates it superficially. We must, then, admit the existence of nervous filaments designed particularly to excite reflex action, and of separate nervous filaments whose function is to transmit impressions of pain.

It is necessary to remark, in the wounds followed by tetanus, that the sensibility to pain diminishes in proportion as the reflex action increases. In certain wounds, unimportant in character and not painful, we notice also a great tendency to reflex phenomena after slight excitement of the wounded surface.

The attentive observation of the progress and development of tetanus is in opposition to the theory of poisoning. Tetanus has occurred a quarter of an hour after an abrasion of the finger by a bit of porcelain. In two cases after wounds, tetanus appeared at the end of eleven or twelve hours. In some cases the patients have recovered after section of the nerve of the injured part.

The symptomatology of tetanus is also opposed to the doctrine of poisoning. We notice that the contractions are limited to certain groups of muscles, in the neighborhood of the wound or in the parts of the body in which it occurs; in the muscles of the anterior part of the body, for instance (emprosthotonos), when the wound is situated in that part. In a great number of cases we have seen the phenomena commence in the part injured, and remain more intense in this part of the body than in the remainder. In other cases the contraction is limited to the half of the body on the side with the wound.

In short, in the greater number of tetanic cases, we notice when the wound is touched convulsive movements limited to the wounded portion if the excitement is trivial, extended to half the body when the excitement is stronger, and to the whole body under still greater irritation. In a case of tetanus produced by a wound of the back, the wound, although painless, could not be touched without exciting general contractions. Such effects are incompatible with the doctrine of poisoning.

Pathological anatomy, which shows congestion of the cord, also furnishes an argument against the theory of poisoning, as otherwise we must admit that in tetanus a toxical agent is generated with properties analogous to those of strychnia; but in cases of strychnine poisoning, in a short time the reflex faculty of the whole of the cord and medulla is increased. In traumatic tetanus, however, the congestion is limited to certain parts of the cord, which corresponds with the symptoms. This is all opposed to the toxic theory, and is in accordance with the reflex origin of the disease.

To the objection that the nervous lesion does not exist in a sufficient number of cases, it may be replied that it has not always been sought. Experience shows that though exempt from alteration in one part of its tract, the nerve is visibly altered at other points. But material alterations are not necessary to justify the theory. Who has ever seen any vital property whatever? The increase of a vital property, sensibility, reflex activity, &c., may very well exist without visible material alteration.

Finally, the *treatment* of tetanus shows that it is not of toxic origin. The effects of poisons do not yield to multiple medication; toxical agents have antidotes, tetanus has none. The cases in which tetanus has been cured by section of a nerve or by amputation of a limb show the influence of peripheric nervous irritation in its production.

THE CHANNING HOME.

From the report of this very worthy charity, for the year ending April 1, 1870, we learn that during that time its ministrations have been continued to the utmost extent that the capacity of the Home would permit. During the year, 13 new patients have been admitted, 6 have died, and 16 have been discharged well or much relieved.

It must be remembered that this is not a hospital, in the common acceptation of the word, but a home for incurables, for those whose early death seems quite certain, or those who will probably live for a long time, but need constant medical attendance. Two results follow from this: one that the number of deaths is proportionally larger, the other that some of the patients remain for many years. This is the only institution in the city where this principle has been so long and so persistently carried out, and it constitutes one of its peculiar claims to support.

In the early part of the year, the Trustees purchased, for the use of the Home, the estate No. 8 McLean street, and have fitted it up for their use. The institution is thus in possession of a larger and more appropriate house, and with increased facilities for air, light and more agreeable surroundings.

The officers for the current year are Dr. Samuel A. Green, President; Theodore Metcalf, Treasurer; Charles P. Curtis, Secretary. The medical staff consists of Drs. Munroe, Hayden and Tuck.

Uterine Inertia overcome by Manual Distention of the Perinæum. By Dr. Van der Meersch.—The distention of the perinæum, by the pressure of the child's head, excited by reflex action, increases uterine contractions, a fact which all accoucheurs have verified. The application of the forceps, by the distention of the vulva and the perinæum which it causes, always gives the same result. Dr. Van der Meersch, having had his attention called to these facts, has employed, for some years, and with great advantage, a method which brings about the same result. When, toward the end of labor, the pains begin to grow feeble and at last to disappear entirely, whether the membranes are broken or not, the cervix more or less obliterated, he excites them anew by introducing the right index and middle fingers as far as the head of the child; then separating the fingers to the distance of four or five centimetres, he applies the tips to the recto-vaginal wall against which the head should be pressing, and then draws them gradually toward the external orifice, pressing against the wall so as to exercise a decided distention of the perinæum. Repeated several times successively, especially at the period of a pain, this little manœuvre brings about rapid and effective contractions, in place of infrequent and feeble ones.—*L' Union Médicale*, 14 May.

The method of Dr. Van der Meersch is not unknown among us, but has been employed by accoucheurs in Boston for many years.

A writer in *L' Union Médicale* suggests the employment of iodoform as a dressing in cases of syphilitic rupia, phagedenic chancres, varicose ulcers, plaques muqueuses and fissure of the anus. The drug is sprinkled on the surface, and covered by gold beater's skin or cotton spread with cerate. It is left on for four or five days without being renewed. M. Demarquay has used iodoform, united with cocoa butter, in dressing the ulceration of cancer. He employs it, in this case, as a local anæsthetic and detergent.

Remarkable Case of Insatiable Appetite.—Perhaps the most extraordinary instance, says *Nature*, of excessive and depraved appetite on record is that of a French soldier, named Tarare, whose case is described in vol. xxi. of the *Dictionnaire des Sciences Médicales*, by Dr. Percy. He was born near Lyons, and came up to Paris, where his first exploit was to eat a basket of apples—at a friend's expense. On various occasions he swallowed a series of corks and other indigestible materials, which produced such violent colic that he was obliged to attend the Hôtel Dieu, and whilst being examined almost managed to swallow the watch-chain and seals of the surgeon in attendance, M. Giraud. Desault, on the occasion of one of these attacks of colic, tried to frighten him out of his gross habits by declaring that it would be necessary to open his stomach, and arranged the instruments; he ran away and relieved himself by copious draughts of warm water. Soon after he found that his appetite had really increased to an excessive amount, probably owing to the continued irritation produced by these absurd tricks. At 17 years of age, when only weighing 100 lbs., he could eat 24 lbs. of beef in as many hours. He now entered the army, and being recognized by the Surgeon-Major, M. Courville of the 9th regiment of Hussars, he was detained for the sake of curiosity. From the day of his admission, he was ordered quadruple rations, with pickings and waste meat, but often slipped into the dispensary to finish off a poultice or two. One day he was observed to seize a large cat, and after sucking its blood, left, in a very short time, only cleanly picked bones, the hair being ejected in the course of about half an hour, like other carnivora. He was fond of serpents and eels, swallowing them whole. On another occasion he consumed in a few minutes a repast, spread out for fifteen German work-people, of milk, &c., after which he was blown out like a balloon. In the presence of some officers he swallowed, at one sitting, 30 lbs. of liver and lights. His insatiable appetite was for once in his life made useful, by his being selected to convey a correspondence between General Beauharnais and a French colonel, which was inserted in a box and swallowed: but he was caught and soundly thrashed. He fell under suspicion of having eaten a child fourteen months old. It is stated that he was of mild and gentle manners and aspect. After death his stomach was found in a very diseased condition.—*Dublin Medical Press and Circular.*

Physiology of the Blood.—In a recent paper by M. Savotti, in the *Centralblatt*, he describes a phenomenon of great interest, and hitherto unobserved—the entrance of entire pigment-cells into the channels of the capillaries and smaller veins of the web of the frog's foot through their walls. This is the converse process to that exit of white corpuscles of the blood through the walls of the blood-vessels, which has attracted much attention, and as to which the researches have been brought under the notice of our readers. M. Savotti uses a dilute solution of sulphuric acid—2 per cent. The cells contract and become aggregated around the minute vessels. Then, putting forth processes, one pierces the wall of the vessel and enters its cavity. The whole cell sometimes is drawn in, and after remaining adherent for a time to the vessel, gradually moves onward with the current of blood. The observation is one of great physiological interest. It will of course require verification.—*British Med. Journal.*

A Modification of the Operation for Artificial Pupil.—M. Liebreich has just presented to the *Académie des Sciences* an instrument which he has devised for the purpose of modifying the shape of the artificial pupil more surely, and more in accordance with the demands of each individual case than hitherto. It depends on the application of a mechanical principle, which has not as yet been utilized in surgery, and consists of a forceps whose handles do not open in the ordinary manner, but which revolve on a longitudinal axis in such a way that their rotation both opens and closes their curved extremities. Introduced into the anterior chamber by a narrow incision through the cornea, the forceps may be widely opened without the part of the instrument engaged in the wound sharing in the motion in the slightest degree. Consequently this forceps can be introduced in any given direction, whereas the instrument hitherto employed could not deviate from the radial direction.—*The Medical Record.*

Nitrate of Amyl.—A correspondent of the New York *Medical Gazette* says: Guthrie, who investigated the properties of the nitrate of amyl after the discovery of it by Balard, proposed it as a resuscitative in drowning, suffocation and protracted fainting. It would seem worthy of a trial in the threatened syncope from chloroform; since the inhalation of but a few drops is followed by marked acceleration of the heart and flushing of the face. The writer poured about eight drops upon a towel, and, as an experiment, snuffed it two or three times, when immediately the radial pulse became accelerated, the heart throbbed with much force, and the pulsation of the cranial vessels became almost painful. At the same time there was a decided tingling of the ears. The symptoms lasted but a few moments, the tingling remaining after the circulation had become quiet.

In his Inaugural Lecture to the course of Pathological Anatomy in King's College, Professor Lionel S. Beale thus sums up the essentials of reform in medical education: "Good general examinations year after year during the period of studentship, conducted by examiners appointed for limited periods, whose knowledge has been acquired within a quarter of a century of the period when they examine, is really all that seems to be required. If this were established, all registration formalities and compulsory attendance might be swept away, for the student would soon find out for himself how he could most efficiently study the various subjects of which he would be compelled to show that he possessed a competent knowledge."—*N. Y. Med. Gazette.*

Medical Miscellany.

Mr. Editor,—In an article published July 14, in your Journal, Dr. Mettauer states "that he has witnessed a vast number of scrofulous enlargements of the parotids in the course of his professional life." He speaks of one instance in which "the parotids had attained the bulk of a large man's fist, and very nearly filled the spaces between the clavicles and inferior maxillary bone on each side." I think the profession would be interested in hearing from Dr. Mettauer a fuller account of his observations upon the "scrofulous disease of the parotids."

Respectfully yours, A. B. C.

Bust of Harvey.—Mr. Horatio Stone has recently finished, at his studio in New York, a colossal bust of Harvey, the discoverer of the circulation of the blood, and a sketch model for a colossal statue, from the portrait by Domenichino, which it is in contemplation to complete and erect in the Central Park. They have been on exhibition at the artist's studio, where they have been seen by large numbers of the profession.

Dr. Neumann, of Vienna, in the *Archiv fur Dermatologie und Syphilis*, states that carbolic acid, when injected under the skin, acts three times more quickly than when taken into the stomach. He employs it to arrest the germination of the lower vegetable organisms, in solutions of one part in 300 or 500.

Poisoning by Arnica Flowers.—Dr. A. Schumann, of Dresden, relates the case of a woman who, for suppressed menstruation, drank an infusion of a handful of arnica flowers. After half an hour she was taken with violent vomiting and severe congestion, in a few hours with intense pain in the stomach and intestines, when after nine or ten hours collapse set in. On the third day the pains returned, and, together with intercurrent diarrhœa, continued for eight days longer, notwithstanding suitable treatment. — *Schmidt's Jahrbucher.*

Ichthyosis.—Mr. George Naylor says that local means are of great service in the treatment of ichthyosis. Glycerine, in the proportion of six or eight ounces to thirty gallons of water, at a temperature of 96°, is a useful bath, and twice or thrice a week, or, as this is costly, after using a common warm bath, the whole surface may be spread with a quart of warm water containing two ounces of glycerine; or, lastly, glycerine alone after a bath. When scales are very thick, rub them off with pumice stone. Internally, iron combined with aperients.—*Dublin Medical Press and Circular.*

Baron Liebig. — We regret to learn that, succeeding his severe indisposition from nervous headache and carbuncle on the neck, from which he was recovering, Baron Liebig has been attacked with anthrax. Although his medical advisers hope that his excellent constitution will enable M. Liebig to overcome this new malady, nevertheless his case is regarded with alarm, especially as he is 67 years of age.—*Ibid.*

Oil of Sandal-wood in Blennorrhagia.—Dr. Park, of Stanmore, England, states that after twelve years' experience with the oil of yellow sandal-wood, he is convinced that it is the safest and most reliable drug we possess for the cure of blennorrhagia. He administers five-minim doses every four hours.—*Practitioner.*

Dr. M'Nab recommends the local application of carbolic acid ointment in psoriasis, one part of the acid to four of common lard.

To Correspondents.—Communication accepted:—Temporary Blindness following an attack of Intermittent Fever.

Correction.—In the Editorial on page 27, line 22, in our last issue, for "but" read *or*.

Died,—In Louisville, Ky., July 19, Dr. Powell, for forty years a leading physician of that city, aged 68.

Pamphlets Received.—De l'Œsophagotomie Externe. Par L. Félix Terrier. Paris. 1870.—A Medico-Legal Study of the Case of Daniel McFarland. By Wm. A. Hammond, M.D., New York. Pp. 36.—The Bromides; their Physiological Effects and Therapeutic Uses. By Z. C. McElroy, M.D., Zanesville, Ohio. Pp. 26.—First Annual Report of the New York Ophthalmic and Aural Institute, for the year ending April 30, 1870, with the Act of Incorporation and By-Laws. Pp. 16.—Transactions of the New York Academy of Medicine. Vol. III. Part 9. Pp. 32.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending July 16, 1870.

Cities and towns.	Number of deaths in each place.	—Prevalent Diseases.— Consumption.	Cholera Infantum.
Boston	139	28	18
Charlestown	6	3	0
Worcester	20	3	5
Lowell	25	3	6
Milford	8	2	1
Cambridge	11	0	2
Salem	6	1	0
Lawrence	11	2	4
Springfield	12	2	4
Lynn	6	1	1
Gloucester	6	1	0
Fitchburg	2	0	1
Newburyport	4	0	0
Somerville	5	1	0
Fall River	9	3	0
Haverhill	7	2	0
	277	52	42

From all the above-named places there were reported seventeen deaths from dysentery and diarrhœa, eight from scarlet fever, six from typhoid fever and five from measles.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending July 16th, 139. Males 61—Females 78.—Accident, 3—apoplexy, 2—congestion of the brain, 1—disease of the brain, 5—inflammation of the brain, 1—bronchitis, 6—cancer, 1—cholera infantum, 18—consumption, 28—convulsions,3—debility, 3—diarrhœa, 8—diphtheria, 1—dropsy, 1—dropsy of the brain, 6—drowned, 1—dysentery, 4—scarlet fever, 6—typhoid fever, 2—hæmorrhage, 2—disease of the heart, 3—disease of the kidneys, 3—congestion of the lungs, 1—inflammation of the lungs, 3—marasmus, 2—measles, 1—old age, 3—paralysis, 2—pleurisy, 1—premature birth, 2—puerperal disease, 1—rheumatism, 2—suicide, 1—teething, 2—tumor, 2—unknown, 7—whooping cough, 1.

Under 5 years of age, 70—between 5 and 20 years, 19—between 20 and 40 years, 21—between 40 and 60 years, 16—above 60 years, 13. Born in the United States, 94—Ireland, 28—other places, 17.

THE

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Original Communications.

OVARITIS.

Extract from Lectures delivered in 1869 at the Hôpital de la Pitié, in Paris, by Dr. T. Gallard.
Translated by W. L. Richardson, M.D., Boston.

(Concluded from page 41.)

The progress of ovaritis is sometimes acute, sometimes chronic, but the latter is the rule. It may even sometimes happen, especially in young women, that the inflammation does not pass beyond the congestive stage; and, in that case, especially if it is properly treated, it may disappear after manifesting symptoms which have not extended beyond two, three, or, more rarely, a single menstrual period. Uusually the disease has a long duration, sometimes unusually long, assuming an almost hopeless chronic type. During its entire course we shall find that there are exacerbations, coinciding with the menstrual periods, and remissions, partially corresponding to the catamenial intervals. Sometimes it happens that, after a certain time, the remissions become of shorter and shorter duration, and that the disease assumes a persistency and activity which it did not have at first. At no period of the disease, except in cases of peritoneal complications, are there violent chills, or is the febrile reaction very severe; but, during its whole course, we frequently see slight accessions of fever, with occasional chills, usually coming on towards evening or during the night. The chills are more marked, the fever more continuous and accompanied by profuse perspiration, when, after the disease has existed for some time, suppuration begins.

The termination of ovaritis is threefold—by resolution, induration, or atrophy and suppuration. I do not know of a case, except during the course of puerperal fever, where it has ever terminated in gangrene. Of these, resolution is the most favorable, for it ends in complete recovery. This is usually the mode of termination in those cases of ovaritis which, although undoubtedly acute, have not lasted longer than three months, and in which the disease has not passed beyond the congestive stage. It less frequently occurs when the inflammation has passed the first stage and has entered the period of *red softening*.

Induration, which I have purposely connected with atrophy, does not insure recovery, although it often results in the cessation of the painful symptoms and the return of the general health. We should therefore regard it as a favorable termination, especially when compared with suppuration, even though we are forced to remember the physiological troubles which follow in its train. Induration may follow red softening, and the manner in which it is produced is sufficiently explained by what we know of inflammation in other tissues. Here, as elsewhere, we see the blood ceasing to flow in the inflamed organ, without, however, the size of the organ diminishing. The fluids with which it is filled gradually organize, and the final result of this organization is a copious production of connective tissue, which not only adds to the size of the organ during the period of congestion, but which also often causes it permanently to enlarge. This abnormal deposit of connective tissue does not take place without injury to the constituent elements of the tissues in which it is produced; it contracts them, crowds upon them and obliterates them. Thus in ovaries which are two or three, or even four times the normal size, but which are surrounded by a thick fibrous covering many millimetres in thickness, you do not find many ovarian vesicles. The ova have almost entirely disappeared. These alterations I have often shown you on the dissecting table; and, side by side with these enlarged ovaries, resembling in some respects a fibro-cartilaginous substance, I have shown you other smaller ones, contracted, sometimes atrophied and so shrivelled up that they are reduced some how to a mere trace. You can prove that the anatomical structure of these atrophied ovaries is precisely the same as that of those others which are thought to be hypertrophied. The ovarian vesicle and the ova have alike disappeared in both, and their place has been filled with connective tissue. Is there any difference between these ovaries? According to my ideas there is none, and I do not hesitate to consider the increase of connective tissue in each of these as being the only cause of the atrophy of the vesicles which should make up the proper tissue of the organs. It may be asked, may not this universal increase in size in the one case and diminution in the other depend only on the degree to which the disease has advanced. About this I cannot say, in the absence of observations extending over a period of time long enough to render them conclusive. But I consider the inflammatory nature of these lesions as undeniable, and I desire no other proof than the presence of numerous peritoneal adhesions—evident traces of a previous inflammatory state—which always surround the ovaries, both great and small, about which we are now speaking, and which, together with the changes I have just spoken of, induce me to state that induration, with or without atrophy, is one of the modes of termination of an attack of ovaritis.

These peritoneal adhesions, which fix the ovary in an abnormal position, also extend to the Fallopian tubes, which they finally enclose, rendering them immovable and imperforate. They thus become a serious obstacle to the movements which are indispensable to the completion of the act of fecundation. Moreover, the ova are destroyed, rendered few in number, or else removed from the surface of the ovary by a thick fibrous coating, rendered doubly thick by the peritoneal covering we are now speaking of, and which renders the detachment of the ova almost impossible, even if they should still exist. The result of all these conditions is that sterility is found to be an almost inevitable consequence of an attack of ovaritis which has ended in induration. Of course this sterility will not be complete unless the disease has extended to both ovaries.

Suppuration may produce the same result, but it may give rise to one still more dangerous. The pus forms sometimes in the vesicles and sometimes in the parenchyma of the ovary. In the former case it may remain encysted for a considerable length of time, unless, indeed, the little abscess thus formed should strive to gradually gain for itself a way of escape. Often the abscess, originally formed in the vesicle, will invade the parenchyma, in consequence of a communication being established between the two neighboring purulent centres by the destruction of the intervening walls, and thus the ovary may be completely invaded by the disease. We sometimes see ovaries which have thus suppurated without the matter having escaped beyond the fibrinous coat which surrounded them, the natural power of resistance of the ovary having been increased by the peritoneal false membranes which formed from the effect of the inflammatory action, and which have been deposited over the entire surface of the ovary. It is impossible to calculate the time during which purulent collections following ovaritis can thus remain encysted without escaping beyond the limits of the ovary. The opening of the abscess into the peritoneum, which would at once start up a most acute form of peritonitis, rapidly proving fatal, is a very rare termination of suppurating ovaritis. The opening of the abscess through the abdominal walls is less rare. Its easiest ways of escape are by the rectum, vagina or bladder. Of these, the rectum is most directly in contact with the inflamed organ. It is on this account that ovarian abscesses usually empty their contents into the rectum. Suppuration may also proceed towards the vagina, and it happens quite often that it adopts this course, although the way is somewhat longer and the obstacles more numerous than by the rectum. As for the bladder, it is only in very rare cases that it is perforated by an abscess developed in the ovary. This occurred in two cases reported—the one by Murat, the other by Andral. In the former case the autopsy was made with unusual care, since during life pyelitis had been diagnosticated without the slightest suspicion of an ovarian abscess. I have in my own practice observed a similar case, which, although it lacked the confirmation of an autopsy, was beyond the possibility of doubt a case of an ovarian abscess, following an attack of ovaritis and discharging through the bladder.

As soon as the pus formed in an ovarian abscess finds an exit, recovery may take place in this sense of the word, that the abscess dries up, and the general health of the patient is re-established, although the generative functions, at least so far as the ovary is concerned in which the abscess formed, are more fatally destroyed, even, than is the case when the disease ends in induration.

I wish now to speak of two diseases which might be taken for ovaritis. The first is renal colic; but here the sudden accession, the extreme severity of the pain, its location in the renal region, its extension into the labia majora, as well as the thighs, will serve as a hint to the true diagnosis, which an examination will at once confirm, if there should be need of any confirmation, by an inability to find the painful tumor which is formed by an inflamed ovary.

As to the other disease, which I would have you learn to distinguish from ovaritis, it certainly would not have occurred to me to speak of it had I not myself nearly committed the error against which I would now warn you.

A woman, aged 25, who is employed in a type foundry, and has already had three or four attacks of lead colic, the last of which was about five months since, applied to the hospital, saying she was suffering from a fresh attack of the same disease. On examining and carefully questioning her, I could not discover the characteristic blue line described by Dr. Burton; the abdomen, instead of being flaccid, was slightly tense and painful, especially in the hypogastric region; pressure, instead of mitigating the pain, caused it, on the contrary, to increase, especially when exerted on a line with the left iliac fossa, about the region of the ovary. She had a chill at the beginning of the attack, and even at the time of her admission she had some fever. The pain came on very rapidly, without any known cause; it was lancinating, its maximum of intensity being at a point corresponding with the ovary. A physical examination allowed me to recognize at once the tumor formed by the inflamed ovary, a fact which at once dissipated all our doubts on the subject of a diagnosis. The symptoms, which exist in both diseases, and which might justify our confusion, are the acute abdominal pain and the constipation, accompanied sometimes by nausea and vomiting.

I pass now to the consideration of the question whether some of the causes of ovaritis are not capable of imprinting on the inflammation some peculiar modification, so as to form a new species or variety of the same disease. Of these modifications the more generally admitted are those which occur under the influence of rheumatism, gonorrhœa, tuberculosis or cancer.

So far as the influence of rheumatism is concerned, it is very necessary for us to be careful and not confound with it those effects which result merely from exposure to cold, nor to consider as dependent on rheumatism all those cases in which the disease began with a chill.

I recognize the rheumatic character of ovaritis only in those cases where it develops itself in a rheumatic subject and simultaneously with other rheumatic manifestations. These cases are very rare: Kruger and Murat, who admit the existence of rheumatic ovaritis, have not cited a single example; Copland has reported only two cases. At present there is one patient in the hospital who is suffering from this form of the disease. This woman is 26 years of age. She is strong, vigorous, and well formed, but shows that peculiar color and transparency of the skin which you so constantly observe in rheumatic patients, although yet she has never had any other attack of rheumatism than the one for which we are now treating her. She has menstruated regularly since she was 16 years of age. The only pregnancy, through which she has passed, ended regularly four years ago at full term and without the least accident. She has never shown any symptoms of disease of the generative organs. Just a month ago, when the catamenia had been present for three days, she remained for a long time exposed to cold and wet. Soon after going to bed, she was seized with a violent chill, lasting over half an hour. The catamenia were at once arrested. The next day she complained of malaise, lassitude, fatigue, a feeling of great weakness, and headache. She suffered from thirst, anorexia and slight nausea, but complained of no acute pain in any part of the body. She dressed herself and remained up about the house four hours. It was the fatigue she experienced and not the pain which forced her to lie down. It was not till after eight days of this general malaise, unattended by any well-marked symptoms, that she was seized with a violent chill, which lasted two hours, followed by a high fever, giving way to a profuse perspiration. The morning after this chill, and the ninth day after the exposure to damp and cold, the woman found herself literally fastened to the bed, all the joints of her body being red, swollen, and extremely painful. She complained almost simultaneously of an equally severe pain in the abdomen, in the region of the left ovary, and in the chest at the base of the thorax on both sides, but especially the left. From the time when this new attack began, the fever and chill persisted, returning daily, although with less severity than at first, but always accompanied by a profuse diaphoresis. It was not till the end of these six days, or in other words till the beginning of the sixteenth day of the illness—if we begin to reckon from the first exposure to cold and wet—that the woman came under our charge. The joints were then nearly free from pain. There was a dry cough, and although the tenderness of the left side had almost completely disappeared, there still existed at the left posterior base of the thorax a slight dulness, with feebleness of the respiratory murmur, showing the presence of a slight pleuritic effusion. The skin was hot, the pulse feeble, 104. The abdomen somewhat more tense than usual, painful on pressure all over the sub-umbilical region, and especially in the left iliac fossa. Palpation could discover no tumor, but a vaginal examination showed nearly the same physical signs which we found in the patient of whom I spoke at the beginning of these lectures. The body of the uterus was inclined backwards, and along the left side, on examining very high, a slight tumor was perceived, a little larger than the thumb, movable and escaping from under the finger and excessively painful to pressure. A lateral movement given to the uterus at once produced a most acute pain.

From these symptoms you recognize, beyond all question, an inflammation of the left ovary. It was subsequent to the invasion of rheumatic arthritis that the ovaritis made its appearance, revealing its presence by those morbid symptoms which are so peculiar to it. The ovaritis was here evidently of the same nature as the general arthritis which preceded it, as was also the pleuritic affection. The subsequent history of the case also pointed to the same origin. After remaining ten days under treatment she desired to be discharged. The left ovarian region was still a little painful. On returning to her work, which constantly exposes her to drafts of air, she had a slight relapse of the rheumatic symptoms, but no further ovarian inflammation. The catamenia returned at the next regular period, the ovaritis ending in resolution.

Ricord and later Boureau, Bernutz, and a number of other writers, have considered disease of the ovary as a frequent complication of gonorrhœa. It is to be remembered that it was in their particular department of the Lourcine Hospital, where gonorrhœa complicated the larger part of the diseases they were called upon to treat, that their statistics were collected. This fact alone explains why the proportion of cases of ovaritis attributed to gonorrhœa is so great, a proportion which is not borne out by the observations made elsewhere.

Without wishing to deny the existence of this form of the disease, of which I treated a case in this hospital some three years since, I agree entirely with the opinion of Guerin, who considers ovaritis as one of the rarest complications of gonorrhœa. I have not included syphilitic ovaritis among the varieties of this disease, although I cannot doubt of its existence. I believe that I have myself seen one case, at least, perhaps two, in which a considerable swelling of the ovary could, according to my own ideas, have been explained in no other way.

In cases of uterine cancer the ovaries are not unfrequently inflamed, and yet there is no extension of the original cancerous disease to the proper tissue of the ovary. This form of ovaritis, essentially secondary, may be considered merely as an incidental phenomenon dependent on a grave disease. For this reason it is therefore of but slight importance. Ovaritis, however, may become the source of real danger to a patient affected with cancer, for the reason that, under the influence of any irritation, however slight, the inflammation may assume a grave character and rapidly extend to the peritoneum. This fact explains, in some cases, the accidents which so frequently and surely follow attempts at cauterization or excision, when used in the treatment of uterine cancer.

I have shown you how phthisis may act as a predisposing cause of the ovarian inflammation. I may add that ovaritis, developed under these conditions, assumes more readily than in other cases a chronic form, and is especially characterized by its persistency as well as its slight tendency to resolution. While you need never fear when you have to deal with a patient whose previous health you know about, and whose family history shows that she has no hereditary tubercular tendency; you must, on the other hand, be on your guard lest, in phthisical patients, the ovaritis cause the phthisis to proceed with greater rapidity than usual, and the phthisis cause the ovaritis to assume a chronic persistency and an unusual tendency to suppuration.

I pass now to the prognosis in a case of ovaritis. It rarely places life in jeopardy, when it occurs as the primary disease, unless, indeed, it goes on to suppuration, in which case it may have a rapidly fatal termination. Except in the rheumatic form, and when it does not pass beyond the congestive period, ovaritis rarely terminates in prompt and complete recovery. In the great majority of cases it lasts many months and then ends, after all, in incurable sterility. When it occurs secondarily, as in cancer or phthisis, it becomes a dangerous complication, which may give rise to serious accident, and be of itself sufficient to hasten death.

The treatment of ovaritis differs materially from that of the other uterine or peri-uterine diseases. Like the latter diseases, ovaritis demands antiphlogistic measures; but, in simple ovaritis, they should be employed with much more care and restriction than in metritis or peri-uterine diseases. At the beginning, especially in cases clearly inflammatory in their nature, some bloodletting is useful, especially in strong, robust women. From four to twelve leeches may be applied, either on the loins or the hypogastric region; but usually I prefer to use scarifying glasses, to the number of four or six, applied to the latter region. These have the power of allaying the pain more directly than leeches. This first operation of bloodletting may be repeated in about five or six days, if the persistency of the inflammatory symptoms requires it. In the first stage of ovaritis, I never make use of leeches applied to the cervix uteri. These I reserve till a later period, especially in case the disease seems to show a tendency to become chronic and the congestion of the ovaries at the monthly periods produces no aggravation of the inflammatory symptoms. Then it is that I apply from two to four leeches to the os tincæ a few days before the expected appearance of the catamenia, and I repeat this operation some days after their disappearance. This method of procedure has the advantage of counteracting the dangerous effect produced by the menstrual congestion, and also favors resolution; and I often resort to it for many consecutive months, but without using any other method of bloodletting in the intervals. The loss of blood which follows this method is so small that it can be borne even by the weakest women, for it becomes a part, as it were, of their regular monthly hæmorrhage.

As an adjunct to this, although often as the principal treatment when the withdrawal of blood is contraindicated, it is necessary to have resort to local emollients of all sorts, and to narcotics which we can combine with the emollients; for example, the prolonged warm bath, the sitz bath morning and evening, with decoctions of mucilaginous and narcotic plants, poultices sprinkled with laudanum, injections of simple water or water and laudanum. These are the methods which avail most during the first period. The food should be light, somewhat plentiful; and it is often advantageous to purge the patient occasionally with castor oil or calomel. Later, when the congestion has been succeeded by induration, there are two objects which we must attend to—first to relieve the pain, and second to procure reabsorption of the plastic material which has been deposited, not only in the parenchyma of the ovary, but also on the external surface of the peritoneum. Without, therefore, giving up the use of the narcotic emollients of the first stage, the baths, poultices and injections, it will be necessary to add to them some which are more efficacious in their soothing effect. An injection of about a quart of water, rendered mucilaginous in its nature by the addition of starch, and containing from ten to fifteen drops of laudanum, will produce a most quieting effect when it is administered in the evening, and it may be retained all night. Aran used to pour a certain amount of laudanum into the vagina, having previously introduced a speculum, and then added starch, forming, as it were, a sort of paste, which remained in its place twenty-four hours. I have often employed this method, the efficacy of which, although very useful, is much less marked than would be supposed from the amount of laudanum used. It is at this stage of the disease especially that blisters should be used. Their action in promoting resolution is not as great as we could wish, and I often prefer the actual cautery, applied over the hypogastric region for a space of one or two inches beyond the median line. But the application of blisters has, however, the advantage of opening the way for the administration of morphia by the endermic method, and thus they render good service in a disease in which the element of pain plays so important a part. We should not rely exclusively on local applications for the relief of this pain, but should administer narcotics, and especially opium, by the mouth. Many patients pass a comfortable night after taking a grain or a grain and a half of the extract of opium, and I do not believe it is often necessary to exceed that dose, although it might be doubled without inconvenience; it is better, however, not to give it all at once, but in divided doses—perhaps a fifth of a grain every two hours till it produces sleep, or at least drowsiness. You will often find it of great service to unite opium with calomel, from which combination you will obtain a purgative action as well as a promotion of resolution. As to the latter effect, it is on blisters, to which I have alluded, and especially on the actual cautery, that I chiefly rely. It is perhaps advisable to begin with a series of scattered blisters, which you can dress with mercurial ointment, or paint over the abdomen, every two or three days, with tincture of iodine. As for other absorbents, such as iodine ointment or the internal administration of iodine, do not expect much from them.

Baths and douches are of great value. Tepid alkaline baths may be employed at the outset. As for douches, especially the cold douche, it is necessary to use them only after the complete disappearance of the congestion. I have often seen a dangerous relapse follow the premature employment of this mode of treatment—a mode which is very valuable, but which must be used with great caution. In the treatment of a disease of so lasting and obstinate a nature, mineral waters are very useful. Some waters may have a direct influence in promoting resolution; such is the case with the alkaline waters and those containing bromine or iodine. You may use with advantage, especially if the disease is of long standing, those waters whose tonic and stimulating action will effect the general health of your patient. It is only with this end in view that you should resort to sulphur springs or sea-bathing; or, what is more simple still, to a residence in the country.

When ovaritis ends in suppuration shall we open the abscess or leave it to nature? If it is encysted we must leave it alone rather than to run the risk of injuring some important organ in our attempts to reach it. It is therefore only in those cases where it begins to make an external opening, perhaps into the vagina, or the rectum, or through the abdominal walls, that there is some advantage in an operation. In all these cases it is sufficient to make a simple incision with a bistoury, and this puncture should be made at the most prominent point. When the opening can be made in the vagina it is especially advantageous to make it. Apart from these cases, and those where the abscess attempts to make its exit through the abdominal walls, it is better to await its spontaneous opening, which usually takes place into the rectum.

The hygienic condition of a patient cannot be too carefully attended to. It is not well to maintain for too long a period the strict rules which we recommended for the first few days of the disease. The food should be substantial, and as strongly concentrated into a small body as possible. Marked changes of temperature should be avoided, and especially exposure to cold. For this purpose it may be necessary to wear a flannel garment next to the skin, and especially over the abdomen. Moderate exercise, on foot rather than in a carriage, the jolting of which may produce a painful effect on the diseased organ, should be recommended. All fatigue, mental or physical, should be avoided. You have not of course forgotten that every act, even although a physiological one, of the generative organs is brought about by an increase in the activity of the circulation. Theoretically, then, we are induced to warn patients, attacked with ovaritis, to avoid whatever will produce congestion of the generative organs, no matter how transient its effect may be, and consequently to abstain from all sexual intercourse during the course of the disease. But here, as is often the case, the theory is far from being in such complete harmony with the practice as we might desire, and we have the right, nay, more, it is our duty to question whether so absolute a prohibition may not, in cases where it is rigidly observed, do more harm than good. I am myself perfectly persuaded of the harm thus done; so that while recommending some restrictions as regards the conjugal relation, I am careful not to make my directions too absolute, and my patients rarely suffer in consequence.

I go even further, and I ask if, in certain cases, the sexual act may not exert a favorable influence on the progress of ovaritis, and even constitute our best mode of treatment. I refer to cases where the act may be followed by conception. Bischoff has shown that, in pregnant women, about the fourth or fifth month, the ovary is small, dry, pale, shrivelled up, and contains but little blood, or in other words, is in a condition precisely opposite to that which marks the first stage of inflammation. If, now, it were possible to place an inflamed ovary in this condition, we should do more than could possibly be done by the aid of the most direct treatment, inasmuch as this state of repose would last some months, during which the ovary would be free from those periods of congestion which are, as you know, the stumbling-blocks in the way of treatment. Examples are not wanting of old peri-uterine inflammations being cured by a supervening pregnancy.

These considerations have great practical interest for you. You will often be consulted by families to know whether it is necessary to hasten or delay the marriage of a young daughter who is under your care; and you will find the mother less inclined to expose her child to the consequences of marriage, since she has observed that the catamenia are irregular, painful and accompanied by symptoms which may cause you to suspect inflammation of the ovary. If it is so, if you recognize this state of unnaturally increased periodic congestion, which causes you to suspect that an attack of ovaritis is threatening, or which even is actually just beginning, advise the marriage. You should recommend this for two reasons: 1st, because the young girl is still capable of becoming pregnant, although she may become sterile, if you allow the disease to grow; and, 2d, because, if fecundation does take place, she will probably have a sure recovery from a condition that is not without its inconveniences and its dangers.

BLUE PUS.

By A. H. Nichols, M.D., Boston.

In the *Wiener Med. Zeitung* of April 3, 1870, is reported the result of a series of elaborate experiments undertaken by Dr. Edward Schwarz, at the request of Prof. Zeissl, throwing considerable light upon the nature of the parasite which imparts this peculiar tinge to pus.

This rare phenomenon has been noticed several times during the past year in the Vienna Hospital, and of late has made its appearance in the wards of Prof. Zeissl, in the case of a patient suffering from a suppurating inguinal gland.

The blue tinge was found to be imparted to the charpie and compresses which were used to dress the wound, and it was invariably noticed that this color was much less decided in the charpie which lay in immediate contact with the suppurating surface, than in the moistened compresses more exposed to the air.

The reaction of this colored liquid was neutral.

Upon examining the colored charpie under the microscope (magnifying first 400, then 1000 diameters), the separate fibres appeared quite colorless, and nothing could be detected but pus corpuscles, and numerous minute objects in motion, having a variable form, not unlike vibriones.

As repeated examinations with the microscope gave the same negative results, a different method was next chosen to ascertain, if possible, the cause of the change of color. Linen threads were carefully cleansed and placed for fifteen minutes in immediate contact with the wound. These were next removed and laid upon watch crystals containing a solution either of sugar, albumen, glycerine or serum, where they were allowed to remain under a bell-glass in a moist temperature of 32°–36° C.; the air within being renewed twice each day, and purified by being passed each time through sulphuric acid.

A second series of experiments consisted in suspending linen threads which had been previously immersed in a solution of albumen or sugar, in a moist temperature of 35° C.

Finally, similar fibres were exposed upon boiled potatoes, bread, and paper, in the same temperature.

In each case the results were alike positive and satisfactory, and tend to prove: First, that, in certain conditions of the atmosphere, germs or spores in the air are deposited upon moist surfaces. Secondly, that these germs, when placed in a liquid suitable for their nourishment, undergo uniform changes in form and color. Thirdly, that under other circumstances, the development of these germs is at once arrested.

The linen threads treated in the manner above described, were carefully watched from day to day, and the following changes observed. Upon examining the fibres soon after their removal from the wound, numerous round cells were detected, each containing an albuminous-like fluid (protoplasma) in which were several small nuclei (plasmakömchen). It was next found that the membranous walls of these cells broke up and disappeared, but that the nuclei, contained in the plasma, and nourished by the same, continued to live in a changed condition.

It was noticed soon after the death of the cell membrane that these nuclei began to move and increase in number, by means of cell proliferation, arranging themselves in a row, of which the end cell was generally the largest. It is in this form that they have been known and described as "Bakteridiæ."

The cells are finally seen to lengthen, and form a long delicate body, called, when single, Leptothrix, or if it ramifies, Leptomitus, and classified in the latter form by Kützing among the Algæ.

Sometimes the cells were seen to separate from one another, so as to form, not a long line or chain, but a circular body, sometimes in motion, at others still. In the latter form they have been called by Hallier "Micrococcus": by Karsten, "Microgoridien." The further history of these parasites was found to depend upon whether they were nourished or left to perish slowly.

When placed in some liquid suitable for their nourishment, it was ascertained that they underwent a further transformation, increasing in size, and assuming various forms and even colors, according as the liquid in which they were immersed contained albumen, oxalic acid, sugar or serum. In the serum of the blood, their growth was found to be particularly rapid.

The changes in color are described as follows:—Upon the second day, the parasites began to impart a light yellow color to the albumen or serum in which they were contained. This color became darker on the third day; upon the fourth day it was green, and so on through the darker shades.

In albumen, however, no change in color was noticed after the fourth day, while in glycerine the result was negative from the very first.

Experiments with bread, litmus paper and various vegetables gave equally decisive results.

In conclusion, experiments are given showing how the growth of the parasite and the change of color may be arrested. This may be done by heating the liquid to a temperature of 40°–60° C., or by subjecting it to a stream of ordinary coal gas, or ammonia, or carbonic acid gas.

This discovery will explain the phenomenon which caused no little local excitement in the village of Langenlois, Austria, in the summer of 1868, where it was noticed that bread and pastry, when allowed to stand beyond a certain length of time, suddenly assumed a red color.

It is interesting, moreover, in connection with the phenomenon of red snow, recorded as having fallen in Salzburg in the year 1855, and noticed more frequently in the Arctic regions.

DR. TOWNSEND, in a report of the cholera epidemic of 1868, shows that the epidemic ravages frequently visit villages built on rock, where no subsoil infiltration can take place. He is rather in favor of the theory which attributes cholera to polluted water. —*Dublin Medical Press and Circular.*

Selected Papers.

WE extract the following from the *Edinburgh Medical Journal* for July:—

CASE OF PUERPERAL TETANUS COMING ON NINE DAYS AFTER PARTURITION, AND TERMINATING FATALLY IN FORTY HOURS.

By WILLIAM CRAIG, M.B., C.M., L.R.C.S.E.

Mrs. S., aged 37 years, native of Ireland. Had previously seven children, all of whom were born in South Australia. Her "labors" were always speedy and her recoveries good. She mentioned to me that on her seventh confinement she had retention of the placenta, but notwithstanding she made a good and speedy recovery.

The veins of her right leg were varicose, and on several occasions before her confinements one of these veins (a little above the internal malleolus) burst and caused considerable hæmorrhage. This had occurred before several of her confinements in Australia.

On the 4th of September last, I was called in to arrest the hæmorrhage which had occurred from this old wound. This I accomplished easily by means of a pad and bandage. On the 30th of September I was again sent for, to arrest the hæmorrhage from this same wound.

The next time I saw the patient was on the evening of her confinement.

On the evening of Wednesday, October 27, shortly before midnight, I was requested to come immediately to see her, and in five minutes afterwards I was at her bedside.

On entering her bedroom, I learned that several hours previously she had been delivered of a strong, healthy boy, a woman having acted as accoucheur. The placenta was still retained, although the nurse had made several unsuccessful attempts to remove it. This midwife was very averse to a medical man being called in, and only consented after repeated attempts to remove the placenta had failed.

I found the patient very weak, chiefly from hæmorrhage. The uterus was flabby and uncontracted. Having caused the uterus to contract by external manipulation over the abdomen, I was very soon enabled to remove the placenta, being careful at the same time to remove all clots from the vagina. I found, however, a large amount of coagulated blood in the bed beside the patient.

By the time the placenta was removed the patient was very faint, and I accordingly administered a little stimulant, and she soon revived. The patient passed a good night, and told me next day that she had slept well, and never was better after any previous confinement. For more than a week she appeared to be making a fair recovery. The secretion of milk was very copious; and on Thursday, November 4, eight days after her confinement, the patient was so well that she insisted on getting up out of bed, but as her pulse was fully 80 per minute I refused to allow her. Her pulse since her confinement had generally kept above 80, and sometimes was as high as 100 per minute.

The high pulse was suggestive of mischief, but as her appetite was good, and the secretion of milk abundant, I hoped that no bad results would follow.

On the morning of Friday, November 5, whilst she was at breakfast, she suddenly felt something wrong with her throat when swallowing some tea. She told me of this when I saw her in the course of the forenoon, but I thought she had caught cold, and told her to wrap her neck in flannel, and at the same time gave her ten grains of the compound powder of ipecacuanha.

On the afternoon of the same day, I was sent for, as she was worse; but being professionally engaged elsewhere at the time, it was several hours before I could see the patient. Meanwhile, another medical man was called in to see her, who ordered a mustard poultice to be applied to the throat. I saw her in the course of the evening, and found that the mustard ordered by my brother practitioner had produced no benefit. I found, moreover, that now she had great pain and difficulty both in opening her mouth and in swallowing. Her own idea was that the "pap of her throat" (uvula) had fallen down, and that if I could only lift it up she would be all right. Of course I knew she was mistaken, but I mention the fact to describe the patient's own feelings at the time. She could not open her mouth sufficiently to allow me to see as far back as the uvula, and she had very great difficulty in swallowing. On external manipulation, however, no pain was elicited, showing the absence of inflammatory action; in fact, she experienced pain only when trying to open her mouth or when swallowing.

Although at this time there was a certain amount of trismus, I could not bring my mind to the conclusion that it was a case of tetanus. Her bowels being somewhat constipated, I ordered her some opening medicine. Hoping it was only a spasm of the muscles produced by cold, I ordered hot poultices of bran and chamomile flowers, along with hot fomentations of the same. All these were applied most faithfully and effectually during the whole night.

Next morning (Saturday, 6th), between 6 and 7 o'clock A.M., I was sent for, as she was no better but worse, the poultices and hot fomentations, although constantly applied all night, having produced no change for the better.

I may here mention, that the patient was fully convinced that something was sticking in her throat, and she wished me to cut in and see what was wrong and rectify matters. Such was her feeling.

It was agreed by the husband and myself to call in another doctor in consultation. I accordingly went direct to Dr. Patrick Heron Watson, who kindly came and saw the patient with me. She could still swallow, but with great difficulty, and Dr. Watson was unable to see the back part of her mouth, owing to the rigidity of the masseter and temporal muscles. The pulse was about 130 or 140 per minute.

After a careful examination of the patient, Dr. Watson gave it as his opinion that it was a true case of tetanus. At his suggestion I ordered Indian hemp, 25 minims to begin with, and 10 minims every hour afterwards; also to continue the poultices and hot fomentations. The medicine I gave the previous evening not having acted sufficiently, I ordered a turpentine enema to be given. This had the desired effect of thoroughly clearing out the bowels. The fæces had a most offensive smell.

Notwithstanding all our treatment, the patient got rapidly worse; and after she was unable to swallow, I ordered nutrient injections per rectum, and even gave the tincture of Indian hemp in the same way.

About mid-day on Saturday, in addition to well-marked trismus, there was added opisthotonos, the longitudinal muscles at the back of the neck being the muscles chiefly affected. They were in a state of tonic spasm. I ordered the hot fomentations and poultices to be applied to the back of the neck also. All our treatment, however, proved unavailing, for the disease, which was now well marked, made rapid progress. The patient was perfectly conscious, and described her feeling as if a "ton weight was dragging her head backwards." What added greatly to the patient's sufferings was an accumulation of mucus in the throat which could not be got rid of, and which produced a sensation of constant suffocation and impending death.

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At this stage of the disease I witnessed an interesting but painful phenomenon. Every five or ten minutes her head was observed to jerk a little backwards, then remain stationary for other five or ten minutes, and then suddenly to jerk again backwards. This interesting phenomenon was well marked, and continued as long as I saw the patient. It had all the appearance of a screw gradually but surely drawing the occiput back towards the shoulders. Jerk after jerk reminded one of another turn of the screw. In short, opisthotonos was now well marked. The expression of the countenance was characteristic of the disease. The teeth were quite exposed, the angles of the mouth drawn much backwards, giving a very ghastly appearance to the patient. The "risus sardonicus," so characteristic of this disease, was in this case very distinct.

I saw her for the last time about 1, A.M., on Sabbath morning, and in two hours afterwards death terminated her sufferings, the disease having lasted forty hours. From the symptoms described to me I believe the immediate cause of death was asphyxia.

There can be no doubt but this was a case of tetanus. In this opinion I am fully confirmed by Dr. Patrick Heron Watson. The trismus, opisthotonos, exposure of teeth, and ghastly grin (risus sardonicus), were all well marked. It was, morever, a case of tetanus coming nine days after parturition at the full time. Of this latter fact there can be no doubt. The deceased expected her confinement in the beginning of September, at least six weeks before it took place; and the child was much above the average in size—in fact, it was the largest new-born child I have ever seen.

There was no appearance of either peritonitis or metritis. The lochial discharge still continued to flow. It threatened to stop, but I ordered hot fomentations, and by this means it readily continued discharging. The secretion of milk continued till the day of her death. Let it also be borne in mind that it happened in Edinburgh during the cold weather of November. The patient, however, was only a few months returned from Geelong, South Australia, where the greater part of her married life had been spent, and where her other seven children were all born. It is necessary to bear these things in mind, since tetanus is a disease much more frequent in warm countries than in cold ones; but I am far from asserting that the fact of her having spent many years in the warm climate of Geelong had anything to do with bringing on tetanus in this case.

A MODIFICATION OF THE ADVANCEMENT OF THE MUSCLE.

By Dr. R. Liebrich, of Paris.

Anatomical researches with regard to the capsule of Tennon, and its connection with the muscles of the eye, the conjunctiva and the caruncle, have induced me for the last four years to modify the operation for strabismus. The following are the results of these investigations:—

1. The union of the muscles with Tennon's capsule is a double one. On one side, an annular union of the posterior part of the capsule and its sheath-like processes directed toward the orbit with the belly of the muscles; on the other, a firm adherence of the anterior half of the capsule with the surfaces of the muscles which project into the hollow of the capsule.

2. The conjunctiva is firmly united with the outer surface of Tennon's capsule from the edge of the cornea as far as to an irregular, annular, well-defined boundary line, and in this way it is indirectly in very important relation to the muscles of the eye.

3. The caruncle, together with the plica semilunaris, rests on a ligament which passes from Tennon's capsule to the edge of the orbit. The contraction of the rectus internus necessitates that by the turning in of the eye this ligament is stretched, and thereby the caruncle which is placed upon it will be drawn toward the inner margin of the orbit. But at the same time also the outer edge of the caruncle, together with the plica semilunaris and a portion of the cornea lying next to and behind it, will be drawn backward and form a fold. This occurs partly because the conjunctiva, in the movements of the eye, lies to a certain extent close to the globe as far as a certain line, but partly also because the muscle, on account of its union with the anterior half of the capsule, draws the latter backward in its contractions, where the conjunctiva, plica semilunaris and caruncle, which are united to it, are obliged to follow.

The procedure to which these anatomical investigations have led me is the following:—In the tenotomy of the rectus internus, I raise up with the forceps a fold of the conjunctiva at the lower end of the insertion of the muscle, cut it through with the scissors, pass through the opening between the conjunctiva and the capsule, separate these two membranes carefully as far as the plica semilunaris, and divide the latter likewise, as well as the caruncle, from the subjacent parts. After having completely freed from the conjunctiva all that part of the capsule which is important for the retraction of the muscle, I separate the insertion of the muscle from the sclerotic in the usual manner, and prolong at the same time the vertical section of the capsule above and below, the greater the retrocession is to be; and then I always close the conjunctival wound with a suture.

As the advantages of my proceeding, I have already given notice two years since, first in the *Archiv für Ophthalmologie*, of the following:—

1. A greater freedom, and a much greater interval for the graduation and the distribution of the operation for strabismus.
2. The avoiding of the sinking in of the caruncle, and every trace of a scar, which are sometimes left behind in the ordinary tenotomy.
3. The avoidance of more than two operations in the same individual, and also of more than one on the same eye.

It has never entered my mind, as has been erroneously affirmed, to recommend the correction of a high degree of strabismus by a single operation.

After having described this modification of causing retrocession of the muscle more than two years since, I now first communicate an analogous modification of its advancement, for the simple reason that, though I had very soon numerous opportunities to try the proceeding for common tenotomy, the indication for advancement occurs much more seldom. But now I have further been able sufficiently to observe the results of the latter, to feel justified in recommending the following proceeding.

After a broad vertical incision of the conjunctiva in the neighborhood of the insertion of the muscles, or better somewhat behind it, I burrow beneath the conjunctiva with the scissors, both toward the cornea and the opposite directions so as to separate it completely from the subjacent Tennon's capsule. Afterwards I make the tenotomy and cut the capsule above and below, in the direction of the insertion of the muscle, so far that the muscle and the part of the capsule that lies upon it are completely movable, and may easily be brought forward to the border of the cornea. Here I fasten them in the following manner. I pass two fine needles, attached to the two ends of the same thread, above and below, at a distance of about one line from each other; first through the capsule and the end of the muscle, and then from behind forward through the conjunctiva, and tie the loop over the conjunctiva. Of such sutures, or rather loops, I apply at least two, one in the neighborhood of the upper, and the second in the neighborhood of the lower border of the muscle. After the muscle and the capsule are in this manner fixed beneath the conjunctiva close to the edge of the cornea, I carefully unite the conjunctival wound with several sutures. If the attainment of the mechanical design demands the shortening of the muscle, this presents no difficulties; on the contrary, this proceeding favors, when necessary, the removal of a portion of the anterior extremity of the muscle and also of Tennon's capsule.

By the latter procedure, we are able to produce a considerable effect on the prominence and apparent size of the eyeball.

But the advantage of this proceeding lies in this, that we avoid thereby the cutting out of the conjunctiva, which very often leads to essential inconveniences, in particular long remaining irritation, tight folds impeding the movements of the eye, &c. In every case it is more rational to spare the conjunctiva, if its excision is not requisite to attain the mechanical effect.—*Archives of Ophthalmology and Otology.*

Medical and Surgical Journal.

BOSTON: THURSDAY, JULY 28, 1870.

A RESOLUTION WITHOUT LEGAL FORCE.

IN presenting, with some diffidence, our views on the following resolution, passed at the recent annual meeting of the Massachusetts Medical Society, we offer them for the consideration of our readers, fully aware that those who voted in accordance with the spirit of the resolution did so with the conviction that the interests of the medical profession and the public generally would be subserved by such action on their part. The resolution is as follows:—

"*Resolved*, That the Massachusetts Medical Society hereby expels from fellowship all those who publicly profess to practise in accordance with any exclusive dogma, whether calling themselves homœopaths, hydropaths, eclectics, or what not, in violation of the Code of Ethics of the American Medical Association."

It should be remembered that expulsion can only be effected in accordance with the By-laws of the Society, as follows :—

"TRIALS FOR OFFENCES.

"XXXI. 1. When charges of infractions of the By-laws shall be duly made against any Fellow of the Society (VII., VIII., IX.), the President shall thereupon select five of the Commissioners on Trials (XIII.), who shall constitute a Board of Trial for the pending case. He shall appoint a time and place for the meeting of said Board, and shall notify the Commissioners appointed, also the complainants and the accused party, of said time and place.

"2. The said Board of Trial shall be empowered and required to meet as above provided, and three members shall constitute a quorum. They shall proceed to organize themselves, and to hear and try the charges aforesaid; and, if convinced that the charges have been substantiated by the complainants, they shall convict the accused, or, if otherwise, they shall acquit him; and, in case of conviction, shall pass sentence, such as the laws of the Society authorize, which sentence shall take effect from the date of its passage.

"3. If, after due notification, the accused party shall fail to appear at the time and place of trial, without satisfactory excuse rendered at the time, he shall be considered as admitting the truth of the charges against him, and shall be liable to sentence accordingly.

"4. Upon showing to the Councillors such cause as shall by them be deemed reasonable therefor, the accused shall be entitled to a revision of his trial by the Councillors, who may, according to their judgment, confirm or reverse the previous decision; and this shall be final.

"5. Legal counsel shall be inadmissible; but members of the Society may be heard as advocates on either side during the trial.

"6. The Recording Secretary of the Society shall be Secretary of the Boards of Trial, and shall attend all trials, and keep a record of the doings of the Commissioners at said trials. He shall enter the several charges preferred, and the result of trial in each case, on the Records of the Society, and shall communicate the same to the President of the Society, and to the President of each of the District Societies, at the close of the trial.

"7. Each Commissioner, and also the Secretary, shall be entitled to receive from the Treasury three dollars per diem for the time necessarily spent in trial and in attendance on trials, with the necessary expenses of travel, as may be decided by the Board: and each Commissioner who shall neglect or refuse to attend the trial for which he has been designated, without offering an excuse which shall be satisfactory to those who do attend the same, shall pay a fine of ten dollars to the Treasurer of the Society.

"8. The President of the Society shall fill all vacancies by death or resignation, or by other causes, whether of the Commissioners of the District Societies or in the Boards of Trial."

This is the only machinery now existing for expulsion, and its form must of course be strictly complied with. It will be observed first, that it applies only to individuals, and cannot be brought to bear upon bodies or classes of members. It is John Doe, the individual, and the practitioner of an exclusive dogma, who is to be thus indicted, and not a class, whether homœopaths or other practitioners; and, secondly, John Doe is to be subjected to a prescribed form of trial. Of course, the resolution before quoted is wholly nugatory and falls to the ground. It may be unnecessary to explain, at least to those who were present, that this action was taken at the last moment before the annual oration; the hour for which having arrived, anything like deliberate discussion was out of the question.

Nobody doubts that it expresses the sentiments and wish of a large majority of the Society. It was the expression of a feeling which has been uniformly, justly and strongly held by the Society for the last thirty years in respect to homœopathy, and, ever since its foundation, in regard to contemporaneous quackery. But grave doubts have always been entertained as to the expediency or possibility of accomplishing the desired end. It was remarked at the meeting in question by Dr. Corliss, a delegate from the New York State Medical Society, that that body had abandoned any attempt to get rid of homœopathic practitioners, and contented itself with overlooking their existence. This has hitherto been the policy of the Massachusetts Medical Society. Unable to get rid of them, it has avoided giving to them the benefit of opposition or of martyrdom ; and this, we think, will be still found, on the whole, the best policy under the circumstances.

Upon reference to the charter of the Society, we find little to aid members in this emergency. The Preamble recites that "the benefit of medical institutions, formed on liberal principles and encouraged by the patronage of the law is universally acknowledged," and the charter provides, among other things, that "any person of good moral character, found to possess the qualifications prescribed by the rules and regulations of the Society, shall, upon examination by the Censors, and not otherwise, be admitted a Fellow ; and the Fellows shall have power to suspend, expel, or disfranchise a Fellow of the Society." The fair construction of this provision seems to be, that any person, qualifying himself by proof of a good moral character, and by passing the examination prescribed by the Censors, which examination must be conducted reasonably, with the fair purpose of ascertaining the scientific qualifications of the candidates, is entitled to membership. As he is not entitled to become a member by reason of his holding any special opinion, or theory in medicine, so, it would seem, he cannot be excluded from membership if he possesses every qualification of morals, and of scientific education and knowledge, by reason of his holding any such theory or opinion. If this were otherwise a majority of the Fellows might exclude every candidate, however virtuous and eminent, who failed to agree with them upon any point of theory or practice. If, then, the holding of certain opinions cannot be good ground for excluding a candidate otherwise qualified, does it not follow that it is no ground for expelling a Fellow who has been found qualified or admitted?

It is to be noted that the words of the resolution touch only those who "publicly profess to practise" such a theory or dogma ; but there seems to be no just distinction between holding and acting upon the theory or opinion. The force and purpose of the resolution is to expel those who embrace the doctrine ; and, if to put the theory in practice is an offence deserving expulsion, the offence must consist in the enormity of the theory itself. We are not aware that this point has been brought before our Courts ; but it may be remarked that in the case of *Barrows* vs. *The Massachusetts Medical Society*, 12 Cushing's Reports, p. 402, the member was expelled for a breach of morals and his disqualification as a homœopathist, though one of the grounds taken was not passed upon by the Court. The Society of course has the right to make by-laws, and to prescribe regulations for admission and membership ; but these regulations must be reasonable. The doubt which we express (and in treating a legal subject, we speak with diffidence, and express ouselves only in the form of doubt) is whether the exclusion or expulsion of a person, otherwise qualified, for holding or acting upon, a theory, or opinion in medicine, not in itself immoral, is a reasonable regulation. If the hoœopathists should at any time obtain a majority of the Society, would it be thought reasonable, and within their legal powers, to exclude or expel all other practitioners?

The Society may properly exact from the candidate a certain amount of knowledge in a certain direction, but it cannot arrest the knowledge at that point. It is not responsible for what the admitted candidate may add to his knowledge, nor for what he may choose to do with it afterward. He may practise veterinary surgery, house-painting or homœopathy, and, if we are right, the Society cannot control his course in this respect. If he practises homœopathy dishonestly, the matter of dishonesty and not of homœopathy is then in question. Let any member of this Society imagine himself to be prosecuted for damages claimed by another member of the Society who had been expelled for his homœopathic practice. Let the supposed defendant peruse the first paragraph of our charter, which alone indicates the motive and purpose of the legislature who granted it, and maturely consider upon what ground he would defend himself. Or, let him actually go to the present Massachusetts Legislature and ask them what peculiar views of medical practice they originally intended or profess now especially to endorse. Really, we are led to the conviction that the less we meddle with this whole subject the better off we shall be. We earnestly request those who are interested in the subject, and those who are expected to act upon it at the next Councillors' meeting, to converse with lawyers in regard to the powers conferred by the existing charter of the Society. They can then decide how far they are ready to endorse the views of those who for the last eighty years have studied the subject, and who have thought it expedient to take no action upon the expulsion of members for any asserted belief in exclusive therapeutic views.

Having said thus much in reference to the interpretation of our existing charter, we should imperfectly fulfil our duty did we not further say that great injustice would be done to an honorable and learned Society were its members compelled to associate on terms of equality with ignorance or imposture. But against the former the requisites for admission to the Society are a guarantee, and as to the latter it is plain that dishonesty or imposture as such would be good cause of expulsion. The practical safety of the Society grows out of the infinitesimal number of homœopaths and other exclusive practitioners within its ranks and their infinitesimal influence and weight in its deliberations. This we believe will always ensure the safety of a medical society constituted like ours. But to those who think differently, one of two courses is open—first, to contrive some way under the existing charter of the present Massachusetts Medical Society by which a sound, straightforward and intelligent physician, who is guided by the best medical light of the age, can exclude from the ranks of the Society another member of more oblique vision and medical practice. Second, to devise a new charter, the language of which will exclude from the ranks of a new society for the next hundred years all forms of medical practice which shall be unequivocally objected to by a large majority of its members.

We are induced to discuss this matter from our deep interest in the welfare of an institution which has done so much for the dignity and honor of our profession, and whose efficiency we are unwilling to see endangered by unwise or hasty action. The present question is to be decided by legal considerations, and we trust that our readers may give their attention to this portion of the subject.

DELIVERY OF FŒTUS BY THE RECTUM.

Dr. Peck, of Iowa, in his report of a case of extra-uterine fœtation and connection of the sac with the rectum, which we copied from the *Medical and Surgical Reporter* into the Journal of July 14, has committed an error in calling it unique. By referring to the Catalogue of the Warren Anatomical Museum, we find that there is in that collection the fœtus, sac and neighboring parts from a woman 40 years of age, who had died insane, and in whose case nothing was known of an extra-uterine fœtation. The sac which contained the fœtus was in the lower part of the abdomen, with strong adhesions to the neighboring parts. The fœtus lay free in the cavity, and had probably reached the full term. A few loose bones and some fæcal matter were also found in the sac, which communicated with the rectum by two small openings. One or two small bones were found in the intestines. There are also in the Museum the bones of a fœtus which were discharged from the rectum of a patient of Dr. D. H. Storer's, in which case the patient recovered. In the collection of the Boston Society for Medical Improvement there is a fœtus which was removed by the late Dr. Miller through the abdominal parietes. On the following day, the fæces were seen about the wound, so that an opening must have existed between the sac and the intestinal canal. It is also interesting to mention a similar collection of bones in the latter Museum, which were removed from the urinary bladder by the operation of lithotomy.

The British Medical Journal on Deaths from Chloroform. *Mr. Editor*,—The *British Medical Journal* for July 2, 1870, has a summary of the deaths from chloroform "in the leading medical journals during the last year and the early part of the present year." His necrology amounts only to ten. We beg to call attention to this point. Your able cotemporary must mean to include in his notice only those medical journals which are printed in Great Britain proper; for on page 301 of Volume IV. of this JOURNAL there was quoted from the *Australian Medical Journal* a circumstantial account of a death from chloroform in the Oven's District Hospital, in Australia, during 1869. This is not one of the *British Medical Journal's* list of ten. In this JOURNAL, also, between July 1st, 1869, and January, 1870, are reported six instances of fatal inhalation of chloroform not alluded to by your cotemporary. These latter cases occurred in this country. The *Medical News and Library* "recorded" in 1869 twenty-five cases of chloroform death. From the form of the statement we infer that most of these twenty-five instances took place within the year in question. P.

PRIZE COMMITTEE ON VENTILATION OF SICK-ROOMS.—At a meeting held June 16—present, Drs. Lyman, Clark and Wyman—various plans for ventilation were brought forward and considered. Some of them were very ingenious and effectual for the objects proposed by their inventors, but too complicated and expensive for general use. None of them, in the opinion of the Committee, met the terms proposed, viz.: "An effective and ready method of ventilating sick-rooms that can be put in operation at the needed moment, with the least difficulty and expense, in houses of ordinary construction."

It was therefore voted: That the time for the reception of the plans of competitors for the prize of fifty dollars be extended to October 1st, 1870.

M. WYMAN,
Chairman.

Cambridge, July, 1870.

SIMPSON MEMORIAL.—A deputation from the Edinburgh committee formed for erecting a suitable memorial to Sir James Y. Simpson has been in London for some days organizing a corresponding committee. As the result of their labors, a meeting of a private character was held on Thursday afternoon at Stafford House, by permission of the Duke of Sutherland. The circular calling the meeting was signed by the Duke of Sutherland, Earl of Dalhousie and Lord Elcho. His Grace the Duke of Sutherland presided. The following resolutions were proposed:—

I. That this meeting cordially approves of the proposal to endeavor in some suitable way to perpetuate the memory of Sir James Simpson—one who has done so much for scientific medicine, and to assuage the sufferings of the human race.

II. That without undervaluing the proposal that has been made to erect a statue in the metropolis of his native country, this meeting is of opinion that no commemoration of a man so eminently practical would be complete which did not embrace the establishment of an hospital where the diseases peculiar to females could be treated, which every friend of the late Sir James Y. Simpson knows was an object ever near his heart.

III. That this meeting is of opinion that a committee should be formed in London to co-operate with the other committees, and to secure the establishment of a suitable and lasting memorial of the fame and character of the deceased.

The Duke of Sutherland, Hon. Mr. Kinnaird, M.P., Lord Elcho, and Drs. William Playfair and Black were appointed on the committee.—*London Medical Times and Gazette*, June 25.

HISTORY OF THE OPERATION OF THE CÆSAREAN SECTION.—According to Prof. T. Gaillard Thomas, M.D. New York (*Am. Jour. of Obstetrics*), this operation was practised among the Jews; it was a recognized operation during the Greek civilization, and during the Roman it received the name under which it is known to us. The first case in which it was resorted to in later times for the removal of a child from the body of a living woman, which can be regarded as really authentic, dates back only to about the period of the discovery of this country, 1491.—*N. Y. Medical Record.*

INSANITY IN PENNSYLVANIA.—Estimating the population of this State at 3,500,000, the number of the insane will be 5,833—one in six hundred. One third of these may not need hospital treatment. Deducting these, we have 3,889 for whom some hospital provision is required. The number of patients in the proper hospitals and asylums is about 1,700, so that there still remain 2,189 who are without the only suitable care and treatment.—*American Journ. of Insanity.*

A PRECOCIOUS MOTHER.—The Registrar-General of England reports the case of a daughter of an Essex laborer who gave birth to a child before she was 11 years of age.

Medical Miscellany.

THE ANTISEPTIC SYSTEM IN SURGERY.—At a recent meeting of the Medical Society of Berlin, the leading surgeons of that city recorded their experience of the carbolic acid treatment of injuries and wounds. Prof. Bardeleben stated that, in two hundred and forty-two cases then in hospital, the success of this treatment was fully confirmed. Fifty of these were serious cases, and three of them compound fractures, which, but for Lister's method, must have been amputated. He had found very good results and less irritation from the use of sulpho-carbolate of zinc, as employed by Mr. Wood, of King's College Hospital. Prof. Langenbeck stated that, although at first he had the greatest distrust of Lister's method, yet two years' experience of it had now so convinced him of its utility, that hardly any operation was now performed in his clinic without the use of carbolic acid. He also had recently two compound fractures of the leg, which, according to still prevailing doctrines, should have been amputated, but had both run a favorable course under the carbolic acid treatment. Prof. Lister, commenting on this discussion in the current number of the *Edinburgh Medical Journal*, observes that the "poisonous action" with which M. Bardeleben has met in one of ten cases, has not occurred at all in his own practice since lac-plaster was substituted for the paste. The local irritation complained of he ascribes to the omission of the use of a "protective" to guard the wound from the direct action of the acid.—*Brit. Med. Jour.*

WE presume we have now heard the last of that execrable impostor, the *soi-disant* Dr. Newton, miracle-worker from America. Like the Zouave Jacob, and others of similar notoriety, "every dog has his day"—so with this latest importation of impudence and falsehood, the populace will suffer him no longer, and at his last performance, at a Baptist chapel in Paddington, he was most unceremoniously mobbed, and it was only by his acrobatic accomplishments that he was enabled to escape the fury of the mob by scaling a garden wall—*for him a miracle*—as it saved him the chastisement, if not the lynching, he so richly deserved. The Baptist minister, also, who pretended to be a believer, and who had lent his chapel to the fellow, did not altogether escape with that delicate treatment he might have desired. Give such men enough rope and they will soon hang themselves—particularly if the public are allowed to be the judges.—*Dublin Medical Press & Circular.*

HOSPITAL FOR SCROFULOUS CHILDREN.—The Department of Public Health of France has founded near Calais a sea-side hospital for the treatment of scrofulous children from Paris. In consequence of the success of the experiments undertaken in 1861, with an hospital of 100 beds, the department has provided accommodation somewhat in proportion to the wants of the Parisian population, and has caused an hospital of 500 beds to be erected. The Empress inaugurated it in July last. Desiring, however, to secure the benefit of sea-side treatment, not only for the destitute, but for the children of persons whose means would not allow them to incur the expense of a residence at the sea, the management has opened the small hospital to children whose expenses of maintenance (1f. 50c. per day) are paid.—*Ibid.*

A LETTER received by a well-known London physician, dated from Munich on the 26th ult., gives a favorable account of the great chemist's recovery. Prof. Liebig's health continues to improve daily.—*Med. Times & Gaz.*, July 2.

DR. AUGUSTUS C. HAMLIN, of Bangor, Me., has been notified by the Surgeon-General, U.S.A., that in case of actual war in Europe he will be appointed special commissioner to report upon the hospital and medical systems of the armies of France and Prussia.

TO CORRESPONDENTS.—Communication accepted :—Simple Dressing by continued Moisture.

PAMPHLETS RECEIVED.—On Cholera and Choleraic Diarrhœa: their Nature, Cause and Treatment. Two Lectures, delivered at the Church Missionary College, Islington, by George Johnson, M.D., London. Pp. 48.—Hypertrophy of the Muscular Walls of the Minute Arteries in Chronic Bright's Disease. By George Johnson, M.D., London. Pp. 8.—Forty-fifth and Forty-sixth Annual Reports of the Officers of the Retreat for the Insane, at Hartford, Conn. Pp. 56.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending July 23, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases.		
		Cholera Infantum.	Consumption.	Dysentery & Diarrhœa.
Boston	181	58	14	12
Charlestown	9	1	2	0
Worcester	22	10	3	1
Lowell	34	11	2	3
Milford	10	1	0	0
Chelsea	4	1	2	0
Cambridge	28	11	5	1
Salem	14	6	0	2
Lawrence	18	4	1	1
Springfield	6	4	0	0
Lynn	9	7	0	0
Pittsfield	4	0	1	2
Fitchburg	8	5	0	1
Taunton	5	1	2	0
Newburyport	5	0	1	0
Fall River	14	6	1	2
Haverhill	6	1	2	0
	377	127	36	25

Worcester reports one death from smallpox. From all the above places five deaths are reported from sunstroke.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending July 23d, 181. Males 88—Females 93.—Accident, 6—anæmia, 2—aphthæ, 1—apoplexy, 1—asthma, 1—disease of the bowels, 1—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 8—inflammation of the brain, 1—bronchitis, 4—cancer, 1—cholera infantum, 58—cholera morbus, 4—consumption, 15—convulsions, 6—debility, 2—diarrhœa, 8—dropsy, 2—dropsy of the brain, 5—dysentery, 4—erysipelas, 1—scarlet fever, 1—typhoid fever, 3—gastritis, 1—hæmorrhage, 1—disease of the heart, 5—homicide, 2—intemperance, 2—disease of the kidneys, 2—inflammation of the lungs, 2—marasmus, 6—measles, 2—old age, 2—paralysis, 3—peritonitis, 1—pleurisy, 3—premature birth, 1—sunstroke, 1—teething, 4—unknown, 6.

Under 5 years of age, 113—between 5 and 20 years, 12—between 20 and 40 years, 21—between 40 and 60 years, 17—above 60 years, 18. Born in the United States, 138—Ireland, 26—other places, 17.

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Original Communications.

CASE OF POISONING BY WORM LOZENGES.

By Benj. D. Gifford, A.M., M.D., Gloucester.

On Dec. 23d, 1869, I was called to a child, three years old, who, two hours previously, had eaten seven "worm lozenges," judged to contain santonin as the medicinal ingredient. I found her in clonic spasms of the left side; pupils widely dilated and uninfluenced by light; respiration, much impeded, eighteen per minute; a viscid, frothy mucus issuing from the mouth at each expiration. The spasms involved every muscle on the left side of the body. The face was twitched into frightful contortions, and pleurothotonos was developed every other second. Pulse fair, 160 per minute. No ability to speak or move. She had vomited freely before I saw her. I endeavored to produce emesis with ext. ipecac. fl. and by tickling the fauces with a feather, without avail. I then gave her chloroform gtts. v. every fifteen minutes; also injections of diluted whiskey. In course of an hour the spasms began to yield and the pupils to respond to light; at the end of two hours she was perfectly quiet. I directed the chloroform to be continued should the spasms return, and left. An hour afterwards they did return, and I was again called. I found her worse than ever. Instead of the muscles of one side, both were involved in the spasmodic action. The pulse was so fast and fluttering that I could not count it. Respiration was very laborious, with mucous *râles* throughout both lungs. I continued the chloroform, with an addition of tinct. opii gtts. v., every twenty minutes; also small injections of whiskey. At the end of an hour and a half the spasms entirely abated, and the patient slept from 8.30 to 11, P.M.; she then awoke conscious, drank some beef-tea, then slept till morning, when she was apparently as well as usual.

A similar case is reported in the *Annale de Thérapeutique* for 1852 (see U. S. Dispensatory, eleventh edition, article Santonin), after what was considered an overdose of santonin, but which was afterwards proved to be strychnia. The symptoms were the same in my case, though instead of cold sweats the body was preternaturally hot and bathed in perspiration. I never suspected strychnia at the time, nor till I had seen the later edition of the Dispensatory. I then subjected one of the lozenges to analysis, by powdering it on a clean porcelain surface, drenching it with sulphuric acid and adding a small crystal of bichromate of potassa. After a few minutes the characteristic purple or violet color was produced, showing the presence of strychnia. The color was of precisely the same shade, though less distinct, as that produced by the same experiment with a specimen of Rosengarten & Sons' strychnia. Hence I conclude that the case was in reality one of an overdose of strychnia, and that the santonin played no part in producing the symptoms. I suppose the admixture of strychnia with santonin is purely fortuitous; but it behooves the manufacturers to carefully test their santonin before sending it out, for in this case it was far from being "positively safe."

PSEUDO-MENINGITIS.

Extracts from an Article by M. Bouchut in the Union Médicale. Translated by Luther Parks, M.D., Boston.

Pseudo-Meningitis as a Prodroma of Acute Diseases (Tonsillitis, Pneumonia, Variola, Measles, Scarlatina).

This form of the affection is very common, and often gives rise to grave errors of diagnosis. It is more frequent at the outset of angina tonsillaris than in the beginning of any other disease. It is met with only in children of a certain age—that of early infancy. I have never seen it in those older than seven years.

Pseudo-meningitis tonsillaris is the result of acute inflammation of the tonsils, and not of diphtheritic or other different phlegmasiæ of these glands. It is the consequence of a vaso-motor congestive hyposthenia of the meninges, inducing hyperæmia of these membranes, and produced by irritation of the extremities of the great sympathetic and of the glosso-pharyngeal nerve. The action is immediate—instantaneous. It is the initial phenomenon of angina tonsillaris, just as among the prodromata of variola there appears, under the influence of reflex action, a *rash*, or preliminary exanthem, more or less immediately preceding the pustular eruption of the disease.

The children are seized with fever, with headache, and with congestion of the face, accompanied with increased heat in that part. The phenomena are analogous to those observed in all acute diseases of the adult: only in childhood, which is the period of violent bodily sympathies, the cerebral congestion is more marked; and, together with burning cheeks and the *facies vultuosus*, there is an indescribable agitation, constant movement, cries, delirium, fright, and hallucinations which greatly terrify the mothers. At the same time there is frequency of the pulse, which is sometimes irregular and intermittent, the vomiting of indigestion, now and then constipation; in a word, everything to deceive the medical attendant for the time, and lead his judgment astray. Mistakes of this kind are not [usually] of long duration, but they [may] last a day or two, and that is too long. The diagnosis should be formed from the first hour, in order that it may be followed by action, since so acute an affection cannot be met by expectant treatment; and the physician, under these circumstances, often thinks he has to deal with brain fever—that is to say, meningitis. He thus decides, and proceeds to treatment with leeches to the ears, to the anus or the ankle; and three days afterwards, the cerebral symptoms having subsided, he thinks he has cured meningitis. I know many of the profession who, in good faith, assume to have thus cured that disease, although it did not exist, pseudo-meningitis having been mistaken for it. On one occasion, indeed, twenty years ago, a physician, now deceased, was called to a two-year old patient of mine during my absence, and applied leeches to the ears, thinking that he was treating meningeal inflammation, when there was only a tonsillitis setting in. Nevertheless, I had declared the same morning that there was no cerebral inflammation. What happened? The leech-bites bled beyond all account, the hæmorrhage could not be stopped, and the child died. Twenty times since then I have seen symptoms of the same kind; that is, acute cerebral disturbance, the sympathetic result of the same cause. I have been myself deceived, like many others, as I have mentioned in my clinical lectures and in the article entitled *Amygdalite* in my Treatise on Diseases of Children.

The sympathetic functional disturbance, which we call tonsillary pseudo-meningitis, attains its highest degree of intensity very rapidly; for, in a few hours all its symptoms are fully developed and do not then go on increasing. The tonsillitis once established, the congestive action in the head ceases, and the local lesion runs its course without other sympathetic symptom than the fever. This form of pseudo-meningitis lasts hardly forty-eight hours. The rapid cessation of the symptoms leads the physician to believe that he has mastered them; and if he have not discovered the angina, which is generally not very obvious in early infancy, he thinks himself to have triumphed over incipient meningitis. But, nature left to herself, or aided by a few revulsives to the limbs, would have done as well without his further interference. Never does tonsillary pseudo-meningitis go beyond the symptoms I have indicated, and it is not fatal.

Is the diagnosis very difficult? No! It is enough to be aware of the possibility of error to avoid it. In young children, indeed, acute tonsillitis is never accompanied by that dread of swallowing, or that dysphagia revealed by an act of painful deglutition, as in the adult; so that, if we wait till the child notifies us of his sore throat, or manifests it by extending his neck when he goes to swallow the saliva, we shall necessarily be deceived. The physician, therefore, who is called to a young child that has fever attended with agitation and delirium, should examine the fauces. He will, by so doing, often find there the point of departure of the febrile reaction; and if he is acquainted with the sympathetic and reflex relation of the nerves of the cervical region, he will not hesitate to attribute to the angina the production of the symptoms which may have disquieted him.

Under the head of *pseudo-meningitis as a prodroma of pneumonia*, Bouchut relates this anecdote. I was called by Dr. L. to see a child, which had vomiting, two days' constipation, very violent cephalalgia, delirium and fever, with great agitation. The little patient had been purged, so that there were no means of ascertaining the sympathetic condition of the intestine. In brief, the physician said here is meningitis. The child scarcely coughed and had no dyspnœa. Yet, wishing to make a thorough examination, I set to auscultating, and discovered fibrinous pneumonia at the summit of the right lung. This was the cause of the symptoms which simulated meningitis.

When, in *adults, pneumonia or variola* is ushered in by sympathetic phenomena, there is no similarity in the symptoms to meningitis; but the resemblance is to insanity. The symptoms sometimes constitute a veritable attack of acute, furious mania, with cries and violence; especially if the patients have been using alcoholic liquor to excess.

In *scarlatina and measles* the pseudo-meningitis disappears as the eruption comes out.

Selected Papers.

A MEDICO-LEGAL STUDY OF HANGING.

By Ambroise Tardieu, Professor of Legal Medicine in the Faculté de Médecine, Paris.

Suicide furnishes almost all the examples of this mode of death. Suicide by hanging is most common in prisons, in insane asylums, and similar places, where circumstances prove that homicide could not have taken place.

Signs of Hanging.—These may be divided into the symptoms observed up to the time of death, and the condition of the body as observed after death.

The material for the first series of facts has been derived from experiments made upon animals, both by Dr. Faure and the author; from the statements of resuscitated persons; from the observations of Fleischman (of Erlangen), who experimented in hanging himself; and from the great collection of cases and drawings made by Dr. Jacquemin, chief physician to the prison Mazas.

At the moment when the body, suspended by the cord, is abandoned to its own weight, a great heat is felt in the head; tremendous noises, and as it were a deafening music, ring in the ears; flashes shoot before the eyes; the legs seem to have acquired an extraordinary weight, and then all sensation is lost. Sometimes consciousness is lost from the very first moment, owing to the occurrence of syncope; a number of resuscitated persons have stated this in the most positive manner, and the author believes it to be more frequently the case than is generally supposed. For the popular opinion that a voluptuous sensation is felt during the first moments, the author finds no authority whatever. Certain persons, however, who have been resuscitated, have described the vague languor which precedes syncope, mistaking it for sexual sensation.

The second, or unconscious phase, is marked by convulsions of the face, and then of all the limbs, particularly the legs. This phenomenon was always present in the experiments made upon animals. In the "prison Cellulaire" several of the convicts attempted to suspend themselves from the upper part of the doors of their cells, but their involuntary convulsive kicks against these doors brought immediate succor (which they would rather have done without). The knowledge of this fact spread among the convicts, and those who wished to die undisturbed took the precaution, before hanging, of placing their mattresses so as to prevent their heels from kicking the door. This convulsive period is scarcely ever absent.

Apparent death ensues. It is during this period that relaxation of the sphincters occurs. But the latter occurrence is confined to *a few cases only*; in the very complete and scrupulous observations made by Jacquemin, the passage of a certain quantity of urine and fæces is noted in but two out of forty-one cases.

Death generally comes soon. The author entirely discredits the theory of Ollivier, of Angers, that it comes sooner when the cord is placed above the larynx. The animals made the subject of experiment die in from twelve to twenty minutes, very seldom before that period (Faure). In man, there is every reason to think that death usually occurs sooner. A prisoner, named Meignant, at Mazas, hung himself from the bars of the *promenoir*; he had been taken thither at half-past ten, and at forty minutes past ten (the dates are very exact) the custodian of the court-yard found him hanging dead. In another case, a woman was resuscitated after hanging seven minutes. A. Taylor considers this possible, in general, after the lapse of five minutes. Fleischmann perceived the symptoms of stupor, noise in the ears, and sensation of weight, at the end of two minutes in one experiment, and of half a minute in another; but the application of the cord upon the trachea provoked them immediately. In most cases, and under ordinary conditions, we are entitled to infer that death takes place in about ten minutes. Accounts of very prolonged resistance to death are mostly apocryphal. But, of all facts of this sort, the following, observed by Drs. Clark, Ellis and Shaw, of Boston, is the most curious (quoted from Parrot's *Thèse de Concours*, 1860):—

"The criminal, aged 28, weighed 130 pounds, and was very vigorous. He was executed at 10, A.M. It is reported that there was not the least perceptible struggle or convulsion. This shows that death was not caused by rapid asphyxia, which is always accompanied by violent convulsions. The lungs and brain were found in a normal state. The primary cause of death, beyond a doubt, was syncope, due to emotion or to the cerebral excitement caused by the sudden fall through a distance of seven or eight feet. After hanging seven minutes, the heart was distinctly heard to beat 100 times in a minute. Two minutes later there were 98 beats; three minutes after that only 60, very weak; in two minutes more the sounds had disappeared. After hanging twenty-five minutes, the body was taken down; there was no cardiac bruit or impulse; the face was purple, though a small space near the ear (where the cord had exerted no pressure) might probably have given passage to the blood. The eyes and tongue were not prominent; the pupils were dilated. The cord had been attached just above the thyroid cartilage. In fifteen minutes more the cord was loosened; after which the body and face gradually became pale. The vertebral column had not been injured. No emission of semen had occurred, which corresponds with the absence of asphyxia and of spinal lesion. At 11.30 a regular movement of pulsation was perceived in the right subclavian vein. On applying the ear to the chest, it became clear that this was due to the heart; a regular and distinct beat, with light impulse, was observed 80 times per minute. The thorax was opened, and the heart exposed, without affecting the pulsatory movements. The right auricle was contracting and dilating with regularity and energy. At noon the pulsations were 40 per minute; at 1.45, only 5; the spontaneous movements ceased at 2.45, but the irritability did not disappear till 3.18, more than five hours after the execution. It is infinitely probable (says Parrot) that the sound heard before opening the chest depended solely upon movements of the auricle."

Effects of Hanging, after Resuscitation.—To elucidate this point, the author contributes the following histories, which will serve as types:—

Case I.—A man hung himself; was discovered insensible, and was taken to the hospital St. Louis, where he remained unconscious for two days. On the third day he spoke with extreme difficulty, and in a scarcely audible voice. His memory was completely lost. Incontinence of urine and paralysis of the rectum; severe pains and persistent twitchings of the lower limbs. Respiration embarrassed; moist râles all over both sides of the chest. Catarrhal cough, thick expectoration and fever. A deep, parchment-like furrow upon the front of the neck.

Case II.—A man hung himself among the scenes of a theatre. It is not known how long he remained hanging; but he lost consciousness directly, and remembered nothing until he came to himself in the vehicle which took him to the hospital. When found, he appeared quite dead. At the hospital, one hour after the attempt at suicide, he answered with precision and intelligence; his face was swollen, his lips purple, and he spat up some blood. While his head rests on the pillow he suffers nothing, and only feels a little numbness in the head and neck; but, when he tries to turn or raise his head, he feels violent pains; he cannot place himself in the sitting posture without very severe pains in the neck. Speech easy and natural. Deglutition extremely painful. The mark of the cord in front is on a level with the upper angle of the thyroid cartilage; behind, it is about two fingers' breadth above the spine of the vertebra prominens; it is two centimetres broad, is red, and in parts excoriated; on the right side it is more marked, and presents several violet marblings. No loss of semen during or after the act; no erection observed; no involuntary evacuation. Next day, better; no new symptom; but a certain numbness of the right side of the head, neck and shoulders remained for a week, to which succeeded a disagreeable sensation of cold, chiefly felt in the night. Sudden violent shoots of pain in the face from time to time. A deep, red line still remained on the right side of the neck after the lapse of two weeks.

Post-mortem Phenomena.—1. Position of the body. Suspension is often incomplete. Among 261 such cases, the author finds the feet recorded as resting on the ground, in 168; the body kneeling, in 42; the body extended and lying, in 29; sitting, in 19; squatting, in 3. Without seeing the drawings, it is impossible to get an exact idea of the facility with which one can die without being "in the least suspended." In such cases we must suppose a decided effort of the will, with the purpose of abandoning the body to its own weight; or else the momentary constriction of the cord, when tightly drawn, causes a rapid loss of consciousness, and the body, becoming inert, bears its weight upon the neck. The danger of experimenting upon one's own body is manifest. If the feet are found touching the ground, it is necessary to remember that this may have happened through stretching of the cord. If the cord is found broken and the body lying beneath, the rupture may have been caused by the weight of the body, or by the strain occasioned by its convulsive movements. This depends upon the position of the knot.

2. Position of the head. It is usually bent forward; sometimes erect, sometimes turned a little to one side, very rarely turned directly back.

3. The arms may fall by the sides, or may rest in various attitudes upon neighboring objects, or the hands may be rigidly grasping the noose, or some other thing.

4. The lower limbs assume various positions, as may readily be inferred. They usually have a violet-red tint, deep in proportion to the duration of the hanging.

5. The face during the first moments is pale, almost natural; but it usually soon becomes swollen, and of a violet hue, which increases in depth. This persists for a certain time after resuscitation. If the dead body remains hanging, the color becomes deeper, the eyes are injected and prominent, the tongue very often protrudes, or is locked between the teeth; but the position of the tongue does not depend upon the point of application of the cord.

6. The neck (according to Tardieu) is usually elongated in a remarkable manner. The print of the cord may present various appearances; for the variety of articles used in suicide by hanging is truly extraordinary. In prisons and insane asylums it is impossible, with the utmost care, to prevent the patient from obtaining his instrument. A soft fabric, pressing but a short time on the neck, may leave but slight traces, or none at all. But a furrow is generally present, most frequently above the larynx. The skin of the furrow may be dry, resembling parchment, or of a silvery nacreous aspect; the edges may be swollen from passive congestion, but ecchymoses are rare.

7. The sexual organs do not experience an orgasm; at the period when emission takes place, sensation is entirely abolished; congestion readily occurs in the erectile organs, through the force of simple gravitation; there is no proper erection, and but very incomplete emission.

8. Internal organs. The muscles of the neck may, though very rarely, be the seat of ecchymosis or sanguineous infiltration. Fracture of the cartilages of the larynx or hyoid body is also very rare, and so is section of the middle and inner coats of the primitive carotid artery. Luxation of the axis or atlas requires great force; it would seem that the knot must be tied under the chin in order to produce this effect. The larynx and trachea generally present a uniform blush on their internal surface; the lungs are usually congested, especially at the base. The gastro-intestinal mucous membrane may sometimes present a degree of redness which might be mistaken for the effect of an irritant poison. The brain is not usually congested, but on the contrary is anæmic, inasmuch as the internal jugular veins are not compressed.

Did the Hanging take place during Life?—Important as this question may sometimes be, we nevertheless possess no one absolute and invariable sign which would enable us to answer it in the affirmative. Orfila hung, during twenty-four hours, the corpses of twelve persons who had died of various diseases, and no change was noticed in the appearance of the face; the pallor of death was not replaced by lividity. Orfila's experiment, however, was not made on persons just dead; if it had been, the effect upon the face would doubtless have been manifest. And, on the other hand, even if the suspension takes place during life, the face may be pale if the body has hung but a short time. All the marks left upon the neck may be produced upon the dead body as well as upon the living. Extravasations of *coagulated* blood are doubtless a *vital phenomenon*, but they are of rare occurrence. When they bear a certain relation to the position of the cord, they are of incontestable value as proof that hanging took place during life. Section of the coats of the carotid is exceedingly rare; and, moreover, it may be produced experimentally, after death, as may the luxation and fracture of the vertebræ. Infiltration of coagulated blood is a decisive sign that fracture took place during life. Orfila and Donné have shown the presence of spermatic fluid in the urethra of men dead of various diseases, and who were not hanged; in fact, it is present very frequently after natural and constantly after violent death. Evacuation of urine or fæces was noted only twice in the forty-one cases of suicide at the "prison Cellulaire." The presence of bloody foam in the air-passages, the rupture of superficial pulmonary vesicles, and the engorgement of both lungs, particularly at their bases, would have a real value as signs of hanging, if they were more constant; and, joined to the absence of the sub-pleural ecchymoses, and the extended tracts of emphysema characteristic of other modes of death, the pulmonary lesions may be considered of great importance in proving that the hanging took place during life. The nervous centres present no important evidence bearing upon this point.—*Journal of Psychological Medicine*, from *Annales d'Hygiène Publique.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE MIDDLESEX EAST DISTRICT MEDICAL SOCIETY.

SAMUEL W. ABBOTT, M.D., SEC.

Stated meeting, July 13th, 1870, at Dr. E. Cutter's, in Woburn. Dr. Chapin presiding.

Dr. W. S. Brown, of Stoneham, presented a large fatty tumor, removed by wire ecraseur from the shoulder of a female patient.

Dr. Harlow related the following case. A lady, aged 76, ceased menstruating at 46. She had been the mother of four children, and had usually enjoyed good health. For several years following, she had no vaginal discharge. About five years since, she had some uterine hæmorrhage, which increased, and was attended with pain in micturition.

By speculum examination, the os uteri appeared rather light colored and harder to the touch than usual. At a later period strange sensations were felt in the rectum, and pricking pain in the act of defæcation. Another examination showed that a large calculous concretion had formed over the os uteri, shaped like a portion of an egg-shell. This was broken up and removed in fragments, which were shown to the Society. They resembled fœtal skull-bones; but when examined by the microscope appeared to contain no bony tissue, but were composed of carbonate of lime.

Their removal was followed by the appearance of a large cauliflower excrescence, filling up the vagina.

Dr. A. H. Cowdrey read a case of placenta prævia, occurring in a primipara aged 19, an anæmic young woman, who had scarcely passed a week of pregnancy without hæmorrhage. The placenta could be felt over the os, and the head presented. Perfect rest was directed, and cool acidulated drinks were ordered. Two days after, natural labor began. Ergot was administered, the placenta separated, and a still-born child delivered. The patient had a good recovery.

Dr. Cutter related a similar case, in which the patient, an Irishwoman aged 22, had the following complications to contend with. She was of a decided tubercular diathesis. When called to see her, Dr. C. found her the mother of a young babe only eight months old, and at the same time seven months advanced in pregnancy with another. She was suffering with severe hæmorrhage. A shoulder presentation and prolapsed funis. Etherized, turned and delivered. The mother did well, but the child died.

Dr. C. spoke of the advantage of the position of the patient on the hands and knees in such cases, not only on account of the advantage gained by gravitation in facilitating turning, but also from the adaptation of the back of the hand to the hollow of the sacrum.

Other cases of placenta prævia were related by different members.

Dr. Cutter exhibited a number of biliary calculi, and illustrated their solubility in chloroform, at the same time suggesting its internal exhibition in cases where they were suspected.

He also exhibited specimens of hydrate of chloral, iodoform and its compounds, with remarks in regard to their use.

Dr. Albert Day, of Greenwood, being called upon, related his experience in the use of chloral in mania a potû. In most cases it was successful, though in a few it was not, and in such cases a single trial only was needed to prove the fact. He thinks it has a direct action on the heart, and that the excessive doses named by some foreign writers are hazardous.

After considerable discussion, on the subject of prices, a uniform fee-table was adopted for the District, and the Society adjourned.

We are informed of the death of another distinguished man, well known in medical literature, Dr. James Copland, of London, Eng.

Bibliographical Notices.

Mémoire sur quelques Phénomènes qui se produisent l'Inflammation aigue de la Membrane du Tympan et souvent même par la simple pression de cette Membrane. Par M. Bonnafont. (Extrait de *l' Union Médicale* (3me serie) du 18 Sept., 1869.

Memoir upon certain Sympathetic Nervous Phenomena which occur during Acute Inflammation of the Membrana Tympani, and often from simple pressure upon the Membrane.

In this paper, read before the Academy of Sciences, August 23d, 1869, the author draws attention to certain facts, the knowledge of which is of importance to the general practitioner as well as to the specialist. The four cases cited show that a long train of nervous symptoms which might easily be referred to some obscure disease of the brain or its meninges, was plainly traceable to a simple local affection implicating the membrana tympani.

In the first of these cases, the patient was suddenly attacked with severe pain in both ears, together with headache, vertigo, nausea, vomiting and fever. An active antiphlogistic treatment, local bleeding and repeated purgation allayed the general symptoms, but the pain ceased only upon the occurrence of a copious sero-sanguinolent discharge, which finally diminished under treatment, leaving the patient with a decided diminution of hearing.

Some months later, following exposure there was a second attack, with the same symptoms as before. Recovered as before, under the same treatment, but with a still further diminution of hearing. Following this, there was a third attack, during which the patient consulted M. Bonnafont, who found, upon examination with the speculum, the membrana tympani represented by a red, swollen and somewhat sanguineous surface, the meatus being free from inflammation. Leeches gave little relief, but scarification of the membrana tympani resulted in almost immediate cessation of the vomiting and vertigo, and the patient was able to sleep. Slight cauterization with arg. nitr. was subsequently employed, and the patient recovered perfectly and permanently.

In the second case the principal symptom was vertigo, the attacks recurring at irregular intervals, and so severe that the patient would fall if not immediately supported. After submitting some time to treatment for a supposed disease of the brain he came under the care of M. Bonnafont, who discovered the cause of the distressing symptoms in the presence of a large polyp in each ear, filling the meatus almost completely and pressing upon the membrana tympani. Pressure upon these tumors with a probe increased the vertigo.

On the right side there was an abscess of the mastoid process, which communicated by a fistulous opening with the meatus. The polyp of the left ear was extracted by ligature and the base cauterized.

On the right side, owing to the firmness of the growth and its numerous attachments to the walls of the meatus, it was necessary to extirpate it by repeated cauterization with the solid nitrate of silver. At the end of two months the cure was nearly complete and the head symptoms had entirely disappeared. The two remaining cases are cited to show that like symptoms, though of lesser intensity, present themselves as the result of simple pressure upon the membrana tympani, whether from without or within the tympanum, the membrana tympani itself remaining intact.

In the first of these, nausea, slight vertigo and buzzing noises in the ears were caused by the pressure of a foreign body, an agglomeration of pellicles which an abnormal secretion had massed together, at the inner end of the meatus and resting upon the membrana tympani.

Syringing extracted the foreign bodies and relieved the patient from nausea, vertigo and subjective noises.

In the second, the same symptoms appeared, and an examination with the speculum showed the membrana tympani of both ears covered with a thick greyish coating, which at first seemed to be a part of the membrane itself, but a further examination with the probe determined it to be made up of foreign matter, closely adherent and hard to the touch. The removal of this coating effectually did away with the subjective symptoms.

In conclusion, the author gives the results of his observations somewhat as follows :—

"1. Acute inflammation of the membrana tympani provokes nervous phenomena which simulate meningitis and would easily mislead an inexperienced practitioner.

"2. With regard to the symptoms, some, such as pain, elevation of temperature and subjective noises, are characteristic, together with a greater or less degree of deafness, but in addition to these there are numberless others which vary with the individual, such as violent headache and vertigo, accompanied sometimes by slight titubation; the noises in the ear vary in intensity and resemble the sound of bells, music of an orchestra, &c.

"3. The sero-sanguinolent discharge from the ears following a blow upon the head may often result simply from rupture of the membrana tympani without other injury, and does not always imply a fracture, as has been generally supposed when a fall has been followed by a sero-sanguinolent discharge from the meatus.

"4. Pressure upon the membrana tympani, whether from within outward, or from without inward, always causes vertigo, the intensity of which varies according to the idiosyncrasy of the patient. In some cases a drop of water merely placed upon the membrane is sufficient to provoke it.

"5. When in consequence of a pathological condition of the membrane, it is necessary to operate upon it with a cutting instrument, the pain which results reacts sympathetically upon the lachrymal gland of that side, causing an abundant flow of tears; if the same parts of the membrane are touched with a crayon of nitrate of silver, however, the patient feels a slight pricking on the corresponding side of the tongue, accompanied by a metallic taste.

"6. All traumatic lesions of the membrana tympani, whether accidental or made intentionally with an instrument, heal spontaneously and very rapidly, and, do what one will, it is impossible to prevent cicatrization."

The author goes on to speak of the attempts made by the introduction of mandrils and canulæ to maintain a permanent opening, and of the failure of all methods hitherto employed, and concludes in these words: "The practitioner who discovers the means of maintaining this perforation made under the conditions which I have indicated (deafness resulting from thickening, or impairment of the functional action of the membrana tympani), will render the greatest service to humanity. As for myself it is the philosopher's stone for which I have sought ever since I have occupied myself with diseases of the ear, and I shall be the first to applaud such a discovery from whomsoever it may come."

Of the conclusions which the author draws from his observations, some are of particular interest, and would merit a more extensive consideration than has been given them. The fact that the symptoms of myringitis sometimes so closely resemble those of meningitis, is perhaps too often overlooked in cases where there is suspicion of the approach or existence of the latter affection. In cases of the exanthemata in children this may readily happen.

Among the sequelæ of scarlet fever myringitis and otitis media, either uncomplicated or connected with an affection of the throat, are by no means uncommon, and in a large percentage of cases of non-congenital deaf-muteism the loss of hearing may be traced to an affection of the ear following some one of the exanthematous diseases of childhood, in very many of which the disastrous result might have been prevented by care and timely treatment.

Furthermore, the disease, implicating at first only the membrana tympani and middle ear, readily extends itself, and we have in consequence of the spread of an inflammation which might have been controlled a far more serious affection.

A more thorough study pathologically of the causes of meningitis and encephalitis in young children, in connection with aural disease, will probably show that the number of cases resulting primarily from an affection of the ear is much greater than is generally supposed.

Von Tröltsch, in speaking of infantile aural catarrh, says: "I may recall to your recollection that process of dura mater, so rich in vessels which in childhood extends along the whole of the fissura petroso-squamosa, to the cavity of the tympanum and the mastoid cells, and through which the dura mater and the mucous membrane of the middle ear come into closer relations in respect to nutrition than is the case with adults. Each of the disturbances of nutrition and circulation in the membranes of the brain, such as are quite common to children, must extend to the middle ear, from the fact that the blood supply of both is conveyed in the same channel; and the reverse is also true—every primary affection of the ear in a child is apt to produce symptoms of cerebral disturbance. I must not omit to state that in all the cases of infantile external otitis, where I was allowed to make a complete examination, I found also congestion and hyperæmia of the brain."

The last clause of M. Bonnafont's memoir, the conclusion of which is above quoted, makes no mention of cases where the attempt at maintaining a perforation of the membrana tympani has been successful.

The number of cases of deafness where a permanent artificial perforation would not only greatly improve the hearing, but would also rid the patient of the accompanying subjective noises, is very large. The attention of surgeons has long been directed to the attainment of this much desired end, and the latest method employed is that of Dr. Politzer, who substituted for the metalic canula of Bonnafont a very light hard rubber eyelet. The first case in which it was introduced, and of which an account was published in this Journal (March 25, 1869), was decidedly a success, but we have no further reports of cases from the same source.

In that case, moreover, the eyelet was inserted in a cicatrix and not in a perfect membrana tympani, so that it affords no absolute certainty of like success in the class of affections which most demand such an operation, namely, where the membrana tympani is thickened, has lost its resiliency or is adherent to the wall of the tympanic cavity.

That efforts in this direction will be ultimately successful there can be but little doubt, yet there seems to be better promise of such a result in carefully following out the pathological study of those perforations of the membrana tympani, resulting from inflammation of the middle ear, which often so obstinately resist all attempts at inducing cicatrization, than in resorting merely to mechanical means. C. J. B.

Medical and Surgical Journal.

BOSTON: THURSDAY, AUGUST 4, 1870.

DECLARATION OF WAR.

No friend of humanity can look without feelings of interest, mingled with sincere regret, at the threatened war which has been forced on the nations of Europe, apparently by the Emperor of the French; the successor on the throne, as he is the evident heir of those traits of character of the first Napoleon which made him, in the words of the Allied Powers, in 1815, "the enemy and disturber of the world." Nor can we fail to sympathize with the words of the King of Prussia, in his address made at the opening of the North German Parliament, when he charges the Emperor with seeking a pretext for war in a manner unheard of in the annals of diplomatic intercourse, and with declaring war with that disregard for the people's rights to the blessings of peace of which the first Napoleon gave such analogous examples. Truly, "the responsibility falls on one man, who has dragged two great peoples into a devastating war for the furtherance of his own personal interests; two great and tranquil nations, yearning for peace and the enjoyment of the common blessings of Christian civilization and prosperity, and for contests more salutary than those of blood."

In this state of affairs, it must be a matter of professional as well as national pride to note that one of our own countrymen, Dr. Evans, of Paris, has called a meeting of the citizens of the United States at his residence for the purpose of organizing a sanitary commission for the relief of the sick and wounded in the contest which seems imminent. It is proposed that the commission shall coöperate with the International and French Societies in aid of the wounded. Dr. Evans has placed at the disposal of the new organization a report of the Sanitary Commission of our own country in the late war, and a collection of models of ambulances, stretchers, hospital tents and other appliances used in our own armies. A donation of 10,000 francs was also made by Dr. Evans as the nucleus of a sanitary fund.

The name of Dr. Evans is not new in sanitary science. While in Paris in 1867, as a member of the Commission from the Massachusetts Medical Society to the International Medical Congress, and with authority to visit and report on the medical and surgical portion of the Exposition of that year, we had the pleasure of examining carefully the superb collection of the U. S. Sanitary Commission, gathered mostly by the energy and liberality of Dr. Evans. The reports of the various members of the Commission, some of them containing valuable information and suggestions, were read at small meetings of the Society, and—still remain unpublished. We venture to give a short extract from the report of one of the Commission, which will furnish some idea of the material now placed at the disposal of the nations of Europe by our fellow-countryman.

"In speaking of military surgery, your committee cannot refrain from noticing the fine collection, brought together under the auspices of the societies of Europe for the relief of the sick and wounded in service, and, especially, that contributed by an agent of our own late Sanitary Commission. Military surgery has never been represented on a scale so grand as in the present Exposition. Such was the readiness shown to respond to the invitation of the French Committee, that the entire space allotted to this Exposition in the Park is filled to repletion with every means employed by enlightened governments in all parts of Europe and our own country for the relief and sustenance, the medical and surgical treatment and transportation of the sick and wounded of armies.

"The subject of combined international action in reference to the care of the sick and wounded soldier was agitated in Europe in 1863, and in October of that year a convention of delegates from most of the nations of Europe was held at Geneva for the discussion of the subject. The following year a second convention was held, at which an agreement was ratified by representatives of fifteen European governments, by which persons engaged in the care of the sick and wounded of armies in the field, and the articles employed for such care, were declared neutral. Following this decision, societies were formed in the various European countries to carry out its philanthropic intention, and, on the invitation of the Central Committee of the French Exposition, the societies and committees of the various countries have organized an exposition of the articles employed by the armies of their respective nations.

"The collection of the Sanitary Commission of the United States is located in a separate building. It represents, in an admirable manner, all the efforts put forth by the Sanitary and Christian Commissions, by the Medical Staff of the Army and by the women of America in the late rebellion. It is, in this department, *far* ahead of the offering of any other country, and, as a memorial of the tender regard in which the Northern people held their soldiers in the field, is indeed an honor to us.

"As no organization now exists representing the bodies contributing to this collection, we are largely indebted for its existence to our countrymen, Dr. Thomas W. Evans, of Paris, and Dr. E. A. Crane, formerly engaged in the Sanitary Commission, both of these gentlemen being desirous that the means and apparatus, which had so successfully relieved much of the suffering of our soldiers, might be placed before the world, to be copied and employed in case of subsequent European or other wars. Not only has Dr. Evans made this contribution to sanitary science—he has written and published in good style and distributes at his own expense several volumes on the subject in question, and has issued a translation in French of many of the essays published under the auspices of the Sanitary Commission during the war and issued to medical officers.

"It is a satisfaction to know that the sanitary collection of America has received the *Grand Prix* of the Exposition, and that it excites the utmost interest, not only in military and professional circles, but in the visiting public generally.

"In the collection of the United States, the subject of transportation is illustrated by a large and beautiful model of a hospital car, complete in all its parts, by ambulances, models and drawings of hospital transports, horse litters and stretchers. The ambulances of supply are represented by army medicine wagons, ambulance kitchens, coffee wagons, medicine panniers and knapsacks. Hospitals are represented by models and drawings of those employed in our service, hospital tents, furniture, &c. In the matter of surgical instruments, there are shown samples of all the cases issued by the Medical Department to its officers in the field, with surgical appliances in the way of splints, fracture beds and artificial limbs. As sanitary supplies, there are displayed samples of all those articles of clothing, bedding, &c., which were supplied by the Sanitary and Christian Commissions and by the women of America all through the war, and by those many miscellaneous articles which were so freely supplied to the hospital and the field to relieve the suffering, to supply the comfort and even to gratify the taste of the soldier and remind him of home. The Exposition also contains a great number of works, both large and small, which have been written in connection with our Commission during the war."

WE publish to-day a selected article from that portion of the *Journal of Psychological Medicine* known as the "Chronicle." It contains a series of well-selected abstracts and reviews, and is, in fact, an excellent *résumé* of the German psychological literature of the day and the advanced views of that school. The Chronicle for the present quarter has been collated and translated by Dr. D. F. Lincoln, of Boston. We regret that the accidental omission of his name in connection with this portion of the *Psychological Journal* deprives him of the credit which is due him.

In our selected paper of this week are the details of a case originally reported by Drs. Clark, Ellis and Shaw, where irritability of the auricle after death was marked. In connection with this case, the report of an observation which I made in May, 1868, while an *interne* at the Massachusetts General Hospital, may be of interest. A man, middle aged, and a slater by trade, fell from the roof of a building sixty feet in height, striking on his head and back, causing a fracture of the skull. He was taken up insensible and carried to the hospital, where he lived for half an hour. In one hour after he died, I made the autopsy. The liver, spleen and both kidneys were found fractured, and the abdominal cavity nearly filled with fluid blood. On opening the pericardium and raising the heart, the auricular appendage of the right auricle was seen to erect itself and then collapse. On being touched by the finger a repetition of the phenomenon occurred. The irritability gradually decreased until two hours and a half had elapsed from the time the autopsy was commenced, when the application of stimulus failed to cause it. H. H. A. B.

The New York *Medical Record* comments as follows on the resolution passed at the recent annual meeting of the Massachusetts Medical Society:—

"As we understand the case, the statutes provide for the admission of irregulars into this body. If we are right, such a resolution does no more than record the expression of an opinion. We sincerely hope that the contrary will prove to be the case, and some practical good may come of it."

Treatment of Otitis Media Purulenta.—Dr. Millingen says that this is one of the most painful and obstinate diseases of the ear, and is alike uncertain in prognosis and difficult to cure. The object to be attained is the healing of the diseased mucous membrane. Forcing air into the tympanum through a catheter is by no means sufficient to remove a mass of thick secretion accumulated in and adherent to the sides of the tympanic cavity. Syringing the external meatus does very little good, as only the pus lying in the external meatus is removed; or if there be a perforation in the tympanic membrane, only a small quantity of that which is contained in the tympanic cavity. The Eustachian tube, generally the starting point of the disease, is also affected. If the mouth of the tube be examined, it will be found to be, in most cases, inflamed, if not ulcerated, and it is to be inferred that the whole mucous membrane of the ear, beginning from the membrana tympani to the mouth of the Eustachian tube, is covered with purulent secretion. The idea suggested itself to Dr. Millingen to try a new mode of treatment which has been adopted in the clinique of Dr. Politzer, of Vienna, with the most favorable results. It consists in catheterizing the patient, and after having insured the passage of air into the tympanic cavity, by means of the otoscope, to syringe tepid water several times successively through the tube into the cavity with sufficient force to bring out all the pus that may be there contained; the second step is to blow in air again, in order to drive away any water which may have remained in the tympanum; and, lastly, whenever the case requires it, to blow in through the same cavity a few drops of some astringent solution. —*Medical Times and Gazette.*

New Method of treating Confluent Smallpox.—*L'Abeille Médicale* says:—" M. Chauffard has recently made the following communication to the Société Médicale des Hôpitaux:—' The treatment of which I have to speak consists in the employment of large doses of crystallized phenic (carbolic) acid, a therapeutical agent whose efficacy in the secondary fever of severe confluent smallpox—a secondary period when, as is well known, the majority of patients attacked by severe confluent smallpox succumb—appears to me established.

" 'To judge the more clearly of the efficacy of this remedy,' says M. Chauffard, 'I have used it exclusively in five cases of absolute severity, and, to my great surprise, in all these cases I have observed the rapid disappearance of the intense febrile phenomena, and of the symptoms of suppuration. One only of these five cases died, but at the time of his death he had been convalescent a fortnight.'

"The dose of the medicine adopted was one gramme (15·4 grs.) of crystallized carbolic acid in a mixture of four or five ounces, to be taken in the course of the day. The treatment is completed by the application of carbolic acid lotions externally."

Our readers will remember that our Lyons correspondent, in his recent letter, adverted to this treatment.—*Dublin Medical Press and Circular.*

RATE OF DEATH FROM CHLOROFORM.—From a lecture on Death from Chloroform, by Benj. W. Richardson, M.D., F.R.S., published in the London *Medical Times and Gazette*, we take the following :—

In the commencement of our inquiries it is well to consider what is the actual proportion or rate of death from the administration of chloroform. To arrive at correct results on this subject is a difficult task, for many deaths have not been recorded, and there is a natural diffidence on the part of individuals and of the managements of public hospitals to speak of fatal cases. When a practitioner has administered chloroform a very large number of times without having met with a fatal case, he is often led to underestimate the danger, and to ascribe his success to some particular mode of administration. I am satisfied this is not reliable experience. I can myself say that I was never present when a human being died from the administration of any anæsthetic, and I have been engaged in the study and practice of general anæsthesia ever since the introduction of the practice. But the favorable evidence I should give on my experience would be worse than worthless, for at least three times in my life some accident has prevented me from being present at cases which have ended fatally, and which would have ended in the same way had I been the administrator. But recently I was conversing with a surgical friend on this subject, who was not himself an administrator of chloroform, and who told me that he had been present at not less than six fatal administrations. Now his experience had not been so large as mine, yet had it been six times as large it would have been six times more unfavorable. I have here reports, very brief in each case, but most important, of over four thousand administrations of chloroform by the late Dr. Snow, all drawn up by his own hand; the whole record is free of a fatal case; there are some close escapes of death, but no obvious direct death from the narcotic agent. This again is a remarkable experience, but if I were to compare it with the experience of two other equally careful administrators who have followed faithfully the method and practice of Snow, theirs would differ full half as much as that of mine and of my surgical friend of whom I have spoken.

Here before us are a still more valuable series of facts. When I was engaged in writing the Medical History of England for the *Medical Times and Gazette*, in the years 1864 and 1865, I visited in turn eight hospitals—viz., Norwich, Lynn, Stafford, Wolverhamptom, Newcastle-under-Lyne, Brighton, Birmingham General Hospital, and Birmingham Queen's Hospital. From the books of these institutions I collected, personally, the number of administrations of chloroform in each institution from the first, in 1848, and before I arrived at a death I recorded no less than seventeen thousand administrations. Now, one death in 17,000 cases reduces the mortality to a nominal value, and if this experience were supported by all experiences we need trouble ourselves little for any better agent than chloroform. But mark the result of the five years' subsequent experience in the very same institutions. Since 1864 there have been in these hospitals 7500 administrations with 6 deaths, or 1 death in every 1250 cases. After I had visited the hospitals above named in 1864, I visited in the same and the following year six other hospitals—viz., at Lincoln, Bath, Oxford, Cambridge, Reading and Nottingham. In these I collected the facts of 7900 administrations from the year 1848, with a result of three deaths, or 1 in 2633 cases. In these same hospitals in the subsequent five years there have been 2762 administrations with a result of 1 death.

If, finally, in relation to these large hospital statistics we put all the facts together, we find that in the twenty-one years from 1848 to 1869 inclusive, in the thirteen hospitals named, there were 35,162 administrations of chloroform, with a proportion of 11 deaths. I believe this to be the largest reliable series of cases of administration as yet collected, and I know it to be just. Doubtful cases of death from the agent there are none, and in every case a qualified and competent practitioner was the administrator.

If from individual and general hospital experiences we pass to the experiences of particular hospitals, we find, again, the widest differences of results from chloroform administration. Some hospitals, like some individuals, are fortunate, some unfortunate. There are before me the statistics of two hospitals so alike we might call them twins: they have the same average of patients, the same average number of administrations a year, the same precise length of experience. In one of these in twenty-one years there have been 1575 administrations without a death; in the other the mortality has been 1 death in 525 cases. I could multiply these illustrations were the labor necessary. It is not necessary. My preliminary purpose is fulfilled if I have proved that, in face of the facts of frequent runs of so-called good luck by particular men, or in groups of hospitals, or in particular hospitals, there is, under the most favorable aspect of chloroform, a given mortality which up to this moment seems to be a necessary mortality, just as there is a mortality from accidents and acute diseases like fevers. The mortality is, moreover, considerably greater than is known, for cases occur constantly which are not recorded. I compute favorably from the facts given above that the rate of mortality is as 1 in 3500 administrations of chloroform (I really think it is greater, and that 1 death in 2000 to 3500 administrations would be nearer the truth); but even at this rate we have no other remedial agent which approaches chloroform in point of danger.

MEDICAL EDUCATION—PROFESSOR HUXLEY ON THE STUDY OF GEOLOGY.—Professor Huxley distributed the prizes the other day, at the University College, to the medical students. The reports of the professors having been duly read, he delivered an address to the audience. Success, he said, upon an occasion of this kind, valuable as it was, in reality was but putting the foot upon one round of the ladder which led upward, and that never was intended to be rested upon longer than was necessary to assist in moving to the next rung. He did not forget the vanquished, however, and he hoped, though borne bleeding from the field, they had been cured by the ministrations of some fair maiden—(laughter)—and in these days when every fair maiden was to be a fully qualified practitioner—(hisses, cheers and loud hisses, which drowned the remainder of the sentence.) The quarter of a century which had elapsed since he occupied a position similar to theirs took him back to a time when he himself was exceedingly well beaten in anatomy and physiology by a member of University College, and he accepted the defeat with the comfortable assurance that he had thoroughly earned it. (Laughter.) After all, it did not matter how many tumbles a man had in his career, so long as they did not make him dirty. (Cheers.) Persons who had to wash and be clean after every such experiment must of necessity lose much time and opportunity. Patience and tenacity of purpose were worth more than twice their weight in cleverness. Speaking of medical education, he said he had, for twelve or thirteen years, been an examiner in the University of London. Although the men who came up there were the pick of the London schools, he had found them all laboring under certain disadvantages, owing to the defective system of education now pursued. What struck him during his long experience of the best instructed of the medical schools was the singular unreality of their knowledge of physiology. He did not complain of the quantity, for there was, if any thing, too much of it, but he did quarrel with the quality. He had invariably found that the men who came up for examination did not know their physiology as they did their anatomy. While anatomy was properly taught as a science, physiology was taught as if it were a mere matter of books and hearsay. This was not a desirable state of things, and his earnest conviction on the point had led him to the somewhat bold course of publicly expressing his opinion. (Cheers.) The saying that every question in the world was a question of finance, really was, to a great extent, true with regard to a medical education. The number of schools in London rendered it almost impossible that competent men could confine themselves to the teaching of the theoretical branches of the profession. Anatomy, which lay in the direction of practice, might be thoroughly taught, but this was not so with physiology. From the very nature of the case, the occupant of the physiological chair remained there until he had achieved professional success, and then he left it; he was clothed, but physiology was bare. (Cheers.) The remedy he suggested was the centralization of the teaching of the theoretical branches of the profession in not more than three central institutions, where able professors could be maintained. He would cut down these theoretical branches to a considerable extent, and would have the elements of physical science taught in the primary schools—physics, chemistry, botany, and the like. (Hear, hear.) Comparative anatomy ought to be absolutely abolished, although it would involve the putting back of such branches as zoölogy and botany to the students' early education in ordinary schools. He would also abolish Materia Medica. (Cheers.) He could not understand why gentlemen who had to practise medicine should be obliged to learn all about drugs, and where they came from; they might just as well be required to learn all about cutlery because they used knives. (Laughter and cheers.) If his views were adopted, there would be left for the four years' study the following nine subjects: Physics applied to physiology, chemistry applied to physiology, physiology, anatomy, surgery, medicine, obstetrics, hygiene, and medical jurisprudence, which would be quite enough for the man's pursuit—(cheers)—and this course would not oblige a medical student to occupy his time with what would not be absolutely useful in his future life. (Cheers.)

A hearty vote of thanks on the motion of Mr. Groth was passed to the learned professor at the close of his address.—*London Daily News.*

Liebig on the Source of Muscular Force.—There are at present two theories of the source of muscular force: (1) that it arises from decomposition of the nitrogenous substance of the muscle, in which decomposition oxygen plays a part—though not an essential part; (2) that it is due to the combustion of non-nitrogenous material.

The former theory is that maintained by Liebig, the latter is denied by Liebig, who urges objections to it in the third section of his recent memoir.

This theory was propounded by Fick and Wislicenus a few years ago, and developed by Frankland, whose statement of the *modus operandi* during the muscular action is as follows:—

Both the oxygen and the combustible nutritive material are contained in the blood which circulates through the muscle. So long as the muscle is at rest they do not act chemically upon one another, but so soon as the brain sends an impulse to the muscle through the nerves, so soon oxidation begins. In this oxidation potential force becomes actual force, part of which takes the form of mechanical motion, and part the form of heat. Such is the source of the muscular power and of the heat which accompanies muscular exertion. The muscle itself is somewhat analogous to the piston and cylinder of a steam-engine, and the urea formed during muscular action is to be looked upon in the light of material which has degenerated by friction, being the index to the mere wear and tear of the instrument.

This view owed its origin to the now well known ascent of the Faulhorn by Fick and Wislicenus, which was performed on a strictly non-nitrogenous diet, and during which the excretion of urea was determined, and found not to be increased above the average.

Fick and Wislicenus argued that inasmuch as they took no nitrogenous food, and excreted no more nitrogen than usual in the form of urea, and yet performed an excessive amount of muscular work, it is impossible that muscular forces can be the result of decomposition of muscle into urea and other products, and that therefore muscular forces must have another source, and that source they declared to be the oxidation of non-nitrogenous matter which they received into their bodies in the shape of the non-nitrogenous diet indulged in during the memorable Alpine journey.

Liebig points out that they omitted to determine the quantity of nitrogen passed in the fæces, and that they did not weigh themselves before and after the journey.

If the animal economy were like a gun instead of being like a watch, reasoning such as the above might be valid. Quoting some experiments by Dr. Parkes, he shows that the increase in the excretion of urea is to be observed a *few days after* violent muscular exercise. He further points out that the production of urea in the body is not exclusively due to muscular action, and cannot therefore be looked upon as the measure of muscular decomposition. Liebig's own account of muscular action is that during it the products of metamorphosis accumulate in the structure of the muscle, and that this accumulation occasions the well-known sense of muscular fatigue. After the muscular exertion is over there is gradual cleansing of the muscular structure, and with this cleansing the sense of fatigue goes away also. Against the theory that oxidation of non-nitrogenous material in the circulating fluid is the cause of muscular action, he adduces the fact that isolated pieces of muscular structure which have been washed with a weak saline solution exhibit muscular action when properly stimulated.—*Medical Times and Gazette.*

Case of Fœtal Montrosity—Labor retarded thereby. By Geo. Whitfield, M.D., Marengo Co., Alabama.—A very robust white woman, æt. 19, seven months pregnant, was threatened with abortion July

27th, 1868. Pains severe and recurring every fifteen minutes; *os tincæ* dilated sufficiently to admit point of index finger; no *show;* uterine tumor indicating progress to *full term*, fundus above umbilicus, although woman, husband and friends asserted positively that she was but seven months gone. ℞ Morphine sulph. gr. one-sixth hypodermically; but one more slight pain a few minutes after.

Twenty-four hours later, on July 28th, pains returned; same prescription, same result.

Twenty-four hours later, on July 29th, pains returned. Upon my arrival, was informed by my friend, Dr. M. Matkin, who had been called in my absence, that it was too late to prevent the miscarriage, as the bag of waters was broken and the head well engaged in the os. Nothing worthy of note occurred in the progress of the labor until after the head was born, when it required *four strong pains* to expel the body. After the fœtus was entirely expelled, it was still attached by the buttocks to the mother in some way or other not yet explicable. While manipulating in wonder to ascertain the difficulty, another powerful uterine effort expelled what at first sight appeared to be another head attached to the lower end of the spine. The "double-headed fœtus," as we at first took it to be, breathed about ten minutes and died.

Upon closer inspection, the supposed supernumerary head proved to be a tumor, just about the size, shape and color of the real head, of a soft, obscurely fluctuating feel, covered with natural skin of rather coarse texture, having on its dorsal surface a large superficial vein with arborescent arrangement running upwards and losing itself on the back. Its pedicle very short, about one and a half inches in diameter, attached to the buttocks and exactly opposite the extremity of the coccyx. On the anterior aspect of the pedicle were the well developed penis and testes, and one inch below these the anus pervious in the normal direction to a six inch probe its entire length.

Finding it was not a head, we now supposed it to be an enormous tumor, of the nature of *spina bifida;* but no persuasion would induce the parents to part from the fœtus, or even the tumor, consenting, however, to its dissection.

Dissection.—The mass was quite vascular, bleeding freely wherever cut, having the appearance of muscular fibre, running in all directions and enclosing five or six cysts, varying in size from that of a pigeon's egg to a small buck-shot, and filled with straw-colored fluid. Within the anterior part, just below the anus, were a few transverse streaks of soft bone. The mass had no connection with the spinal *canal.* We could find no satisfactory cause for the miscarriage, as the woman was in perfect health and had been subjected to no disturbing causes, but supposed that the uterus *might* have cast off its burden, because it had arrived at the nine months in *size* and *weight* if not in *age*, recollecting, however, that we had seen the uterus submit without resistance to much greater distention and weight in cases of plural births.

We now easily understand why *four strong* pains were necessary to expel the body after the head was extruded. Between the fundus uteri and the fœtus a soft cushion (the tumor) intervened.—*New Orleans Journal of Medicine.*

ABNORMAL CONDITION OF THE UMBILICAL CORD, DIMINUTION IN THE SIZE OF THE VESSELS, AND DEFECTIVE NUTRITION OF THE CHILD. By A ED. WILLIAMS, M.D., of Springboro, Crawford County, Pa.—Mrs. W., aged 21, primipara, had suffered during some months of gestation, with intermittent fever, attended with occasional attacks of the most distressing cephalalgia. The disease seemed unusually obstinate, notwithstanding the free and continued use of quinia. A chill occurred only a week prior to labor, which took place June 10th, and this was probably a few weeks before full time.

The head presented, and labor was in all respects satisfactory. The child, however, was very small, weak, and shrivelled, and vigorous efforts were necessary to establish respiration. The cord was double the ordinary size, very white and translucent, and of almost cartilaginous hardness, so much so that it was found necessary to dress it in the erect position. No fluid whatever exuded from the cut extremities, and the vessels were scarcely to be seen at all, so diminutive was their size. The placenta was apparently quite normal. The child was with difficulty kept breathing, and lived but twenty hours.—*The Medical News and Library.*

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The meeting of the Association for 1870, will be held at Troy, N. Y., beginning on Wednesday, August 17th, having been postponed by the Standing Committee from the 3d, at the request of the Local Committee.

Medical Miscellany.

Epispadias in the Female.—At the meeting of the Medical Society of Vienna, May 6th, 1870, Dr. Funk showed the drawing of a case of this kind. The clitoris was absent, and in its place was a groove opening into the urethra, the latter easily admitting the little finger. On either side of this groove were the halves of the fissured clitoris. This girl, seventeen years old, menstruates regularly, but cannot hold her urine long, the latter escaping when she is dancing. This is the simplest kind of abdominal non-union in the mesial line, and presents an arrest of development at a late embryonic stage. It should be remembered that marsupial animals have a double clitoris, and that the same formation exists in cats and dogs, but is only marked by a groove.—*Lancet*, from *Med. Central. Zeit.*

The Bullet-cure for Ileus.—The old remedy for colic, of a bullet or quicksilver taken into the stomach, has been revived, in a modified form, by Dr. Maydieu, of Argent, France. In the *Journal de Méd. Pratique*, Dr. M. declares that, after seventeen years of the ordinary treatment, in which he always failed, he has been invariably successful in the twelve cases which he has treated with *shot*. He mixes No. 5 shot, after careful washing, with olive oil sufficient to cover them, and gives a dessertspoonful every half hour. In five or six hours the vomiting ceases, gases are expelled, and the bowels are moved. Warm baths, fomentations, and injections of milk and honey are always superadded. *Apropos* of this treatment, we take the liberty of telling a little anecdote. Some forty years ago a travelling preacher in England was taken sick with colic, in the house of a good old lady where he was spending the night. The good lady brought a bullet, which, after warming, she induced him to swallow. He was soon relieved from pain, and then began to reflect on the course of the bullet, and at last suggested to his nurse a doubt whether a body so heavy could find its way through the intestinal labyrinth, fearing that it would lodge there permanently. "You need not be the least afraid," said the lady cheeringly, "for that very bullet has gone through *me* at least twenty times!"—*Pacific Med. and Surg. Journal.*

Swallowing Indigestible Substances.—Sir William Fergusson calls attention to the case of a sailor, aged 22, who was in Guy's Hospital in 1853, and who, in the course of ten years, swallowed, at different times, at least thirty-five knives. Some of these, or eroded portions, were occasionally vomited or passed per rectum. He finally died from exhaustion, and, on opening his body, forty different pieces of blades and handles were found in the abdomen.—*Druggists' Circular.*

Mr. Lawson Tait disputes Dr. Nott's claim to priority in extirpating the coccyx for the cure of coccydynia, stating, in a note to the *Lancet*, that Sir James Y. Simpson performed that operation more than eight years ago. The writer adds that so severe an operation can seldom be necessary, as "there are but few cases of coccydynia which resist the subcutaneous incision."—*N. Y. Medical Gazette.*

Dr. Hering, of Vienna, is the successor of the late Prof. Purkinje in the chair of Physiology in the University of Prague. The position was offered first to Prof. Helmholtz, who declined to leave Heidelberg.—*Ibid.*

Sir Dominic Corrigan recommends, in incontinence of urine in little boys, smearing the cup of the prepuce, slightly retracted, with collodion at bedtime. A fortnight's use of this means is generally effectual.—*Canada Med. Journal.*

A correspondent of the *Lancet* writes in praise of hydrate of chloral given, at Dr. Aitken's suggestion, to allay the itchiness attendant on the eruption of scarlatina.—*Ibid.*

Notice.—Part LXI. of Braithwaite's Retrospect was mailed from this office on the 1st inst. to members of the Massachusetts Medical Society who have paid their assessments for the year 1870–71. Members who have paid and do not find the book at their post offices, are requested to forward their vouchers to the Librarian, care of D. Clapp and Son, Medical and Surgical Journal Office, 334 Washington St., Boston.

To Correspondents.—Communication accepted:—Cases of Œsophagotomy.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending July 30, 1870.

Cities and towns	Number of deaths in each place.	Prevalent Diseases — Cholera Infantum.	Prevalent Diseases — Consumption.
Boston	233	81	23
Charlestown	28	7	1
Worcester	26	13	2
Lowell	28	8	1
Milford	10	6	1
Chelsea	8	4	2
Cambridge	19	7	3
Salem	17	2	3
Lawrence	16	6	2
Springfield	11	3	2
Lynn	13	7	1
Pittsfield	4	0	0
Gloucester	5	0	1
Fitchburg	4	0	1
Taunton	12	3	4
Newburyport	4	1	0
Fall River	30	3	6
	468	149	53

From all the above-named places there are reported twenty-five deaths from dysentery and diarrhœa, seven from scarlet fever, and five from sunstroke.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending July 30th, 233. Males 108—Females 125.—Abscess, 1—accident, 7—apoplexy, 5—disease of the bowels, 1—inflammation of the bowels, 2—congestion of the brain, 2—disease of the brain, 1—inflammation of the brain, 5—bronchitis, 2—cancer, 3—canker, 1—cholera infantum, 81—cholera morbus, 1—consumption, 23—convulsions, 4—debility, 6—diarrhœa, 13—dropsy, 3—dropsy of the brain, 2—drowned, 1—dysentery, 5—scarlet fever, 3—typhoid fever, 4—disease of the heart, 10—homicide, 1—insanity, 1—disease of the kidneys, 3—inflammation of the lungs, 6—marasmus, 9—measles, 3—old age, 3—paralysis, 3—peritonitis, 2—poisoning (accidental), 1—premature birth, 1—sunstroke, 3—teething, 3—unknown, 8.

Under 5 years of age, 146—between 5 and 20 years, 13—between 20 and 40 years, 33—between 40 and 60 years, 20—above 60 years, 21. Born in the United States, 182—Ireland, 38—other places, 13.

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Original Communications.

CASE OF ŒSOPHAGOTOMY.*

By A. B. Atherton, M.D., Frederickton, N. B.

On the morning of June 8th, 1870, Annie D., aged 1 year 11 months, swallowed a New Brunswick cent (one inch in diameter). Vomiting came on immediately, and lasted twenty-four hours. From this time up to June 13th, when she was first seen by me, she suffered from slight dyspnœa and choking cough, with hoarseness and indistinctness of utterance. Could only swallow liquids.

Present Condition.—Child healthy looking. Some feverishness. Tongue coated in centre and at posterior part with dirty-white fur.

On examination with finger, the edge of the coin, lying transversely in the throat, could be barely touched. The neighboring parts seemed swollen, so as to interfere with the discovery of the foreign body. Chloroform was given, and various attempts made with œsophagotomy forceps (opening both laterally and antero-posteriorly) to extract it. A blunt hook, fastened to a watch-spring and whalebone, could not be passed down beyond it. In these efforts I was assisted by Dr. Gregory, whose forefinger is considerably longer than my own, but both of us failed to extract the coin.

Want of success was largely due to the continual biting which the patient kept up while the finger was in the mouth. Even when fully under the influence of chloroform, the introduction of anything between the teeth was the signal for the commencement of a constant chewing. A piece of chamois skin around the finger made it scarcely more bearable. There was not room for the use of a gag together with finger and instrument.

Emetics were not tried, for it was thought that, if the severe vomiting which occurred soon after swallowing the coin did not dislodge it, they would not now succeed after its firmer impaction in the swollen soft parts. The operation of œsophagotomy was therefore determined upon.

The operation for removal was performed June 13th, five days after the impaction of the foreign body. Chloroform was given. A fold of skin on the left side of the neck was pinched up and a bistoury pushed through it. This gave an incision from two to two and a quarter inches in length, lying to the inner side of and parallel to the sterno-mastoid. The upper part of the incision was on a level with or a little below the upper edge of the larynx, the lower end extending down to a point just above the end of the clavicle. On dissecting down, the internal jugular vein was seen on the outer side of the wound. This, with the carotid artery and the anterior belly of the omo-hyoid, was drawn on one side, while the thyroid gland and trachea were held to the other. About the middle of the wound, at its deepest part, the edge of the coin was felt through the œsophagus. A slight touch of the knife brought it into view, and, by means of dressing forceps and some enlargement of the incision, it was extracted.

During the operation, no vessel of any size was wounded, and no more than a drachm of blood lost.

Whole surface of wound sopped with a mixture of carbolic acid and water (1 to 4 or 5). One suture was put in the skin at the upper end of the incision. Wound to be dressed with one part alcohol to three of water. Three or four ounces of gruel, made with milk and strained through muslin, to be administered per rectum three times a day. Nothing allowed by mouth.

June 14th.—Speech distinct since operation. Slight cough still. Wound gives exit to saliva and mucus. Enemata remain in rectum four or five hours. Patient is very clamorous for water. May have a teaspoonful occasionally. Continue the other treatment.

15th.—Somewhat restless and feverish.

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* Mr. Editor,—The history of the above case has been sent to me by my former House-surgeon, Dr. A. B. Atherton, of Frederickton, N. B.; and, with his consent, I lay it before your readers. Respectfully,

David W. Cheever.

Can swallow a teaspoonful of water while lying on the back and inclined to the right side, with little or none escaping from the wound; the latter red and irritable-looking about the edges, and filled, as before, with saliva and mucus. Enemata come away as soon as given. Three ounces of milk-gruel, or two ounces of beef-essence, to be administered alternately, with the addition of six drops of tr. opii during the day and of ten drops during the night.

16th.—Slept well last night. Enemata now retained. General appearance better. Pulse 112. Omit opiate during the day; to be continued at night. May give a small quantity of milk from a teaspoon this evening.

17th.—Is able to walk across the room. Milk exudes from the wound when given. May have a gill of milk every day; also two or three teaspoonfuls of wine or brandy in water.

19th.—Doing well. Took more than half a pint of milk out of a teaspoon during the last twenty-four hours; very little if any escapes through the wound. May omit stimulants and opiate. Only two enemata to be given per day.

21st.—No milk has come from the wound since the morning of June 19th (being six days after the operation). Patient allowed to take a swallow or two of milk for the first time, while in an upright posture, and no increase of moisture noticed in the wound; a quart of it has been taken during the last twenty-four hours. Wound more healthy looking, and is contracting; suture removed. Milk and beef-tea to be allowed *ad libitum.* To be fed with a spoon while lying down. Omit enemata.

24th.—Gaining in flesh and strength. Slight cough still continues. Incision healed down as far as suture. Granulating surface an inch and one third long and one third of an inch at its widest part. Granulations touched with nitrate of silver. Omit the alcoholic wash and use the following:—

℞. Ung. resinos. ʒij.:
Ung. zinci ox. benz., ℥ss.
M. To be applied twice a day.

Patient may have all kinds of *liquid* food.

27th.—Cough has entirely disappeared. A mere line of granulations, three fourths of an inch in length. May return home to country. To have ordinary diet after perfect healing of the wound.

July 9th.—Heard indirectly that the child was doing well.

ON TEMPERATURE IN THE SO-CALLED MILK FEVER.

Translated from the Allg. Med. Central. Ztg., by D. F. Lincoln, M.D., Boston.

The following statements are made by Prof. Halbertsma, of Utrecht, as the result of measurements of temperature, taken twice or oftener every day, in 134 cases of lying-in women. The duration of labor, time from rupture of amnios to delivery, force of the pains, condition of the breasts, and state of the genital organs in respect to lesions, were also noted. The temperature before and after evacuation of the breasts was repeatedly measured; and, finally, comparative trials were made of the temperature of the uterus and that of the axilla. The figures here given refer to the axilla. [It is not stated during how many days these measurements were continued; probably during four or five.—D. F. L.]

(*a.*) In 78 primiparæ, the temperature was 38° (100·4°) or lower in 14 cases; above 38° in 66. In 56 multiparæ, it was 38° or lower in 31 cases; above 38° in 25. (*b.*) Temperatures of 38° or below were always observed after easy labors. The breasts were sometimes tense, sometimes the reverse; the quantity of milk also varied greatly. In all these cases the time between the discharge of the amniotic fluid and the birth of the child was less than an hour. (*c.*) Where a higher temperature than 38° was observed, more than an hour has usually elapsed between the discharge of the amniotic fluid and delivery. In other cases lesions of the genitals, infection, phlegmon, or fissures of the nipples were observed. In four cases there had been a twin-labor; in one violent bleeding subsequent to delivery; in another mastitis, which terminated by resolution. (*d.*) Usually, the elevation of temperature was proportional to the length of time that elapsed between the discharge of the waters and the delivery, and to the force exerted by the pains during this period. (*e.*) No connection could be demonstrated between the elevation of the temperature and the tension of the breasts. (*f.*) In some cases there was no difference perceptible between the temperature before and after evacuation of the breasts; in some cases it was higher after nursing, in others lower. (*g.*) The difference between axillary and intra-uterine temperatures remained the same, even in affections of the uterus itself.

The following are the author's general conclusions:—

1. We have no right to connect the sub-

febrile elevations of temperature (Wunderlich), on the third and fourth day after delivery, with the secretion of milk exclusively. The processes which take place in the genitals have certainly a great influence; probably the greatest.

2. Febrile *temperatures* (which alone give us the right to speak of *fever*) are usually the result of traumatic fever, or of the fever of infection.

3. We have at present no right to suppose the existence of such a thing as " milk fever "—unless, with Schröder, we reserve the name for the non-purulent inflammations (*sit venia verbo*); a nomenclature which is not in harmony with that employed in inflammations of all other organs. We should have, in consistence with this system, to speak of lymph-fever, prior to the occurrence of suppuration in the glands; while lymphadenitis would have to be reserved for the actual suppurative stage.

Selected Papers.

RELATIONS OF THE PHYSICIAN TO HIS PATIENTS—CHARGE OF JUDGE SUTHERLAND.

Saginaw (Mich.) Circuit Court.—Bernhard Hesse, Appellee, *vs.* Charles Knippel, Appellant.

The above entitled cause was an action brought for the recovery of $32, the amount of plaintiff's account for medical service rendered in behalf of defendant's wife, commencing December 30, 1868, and terminating January 29, 1869, at which time the patient died.

It was a case of confinement, in which the defendant, for pecuniary reasons, employed a midwife, and immediately after the birth of the child and expulsion of the placenta, an alarming hæmorrhage supervened; whereupon the defendant called upon Dr. Hesse, a reputable practitioner of medicine in East Saginaw, for its suppression. The doctor, on his arrival, half an hour subsequent to her delivery, promptly applied himself to the discharge of his professional duties, and in the use of ordinary remedies stopped the hæmorrhage, which had been unusually severe, involving, according to the evidence, the loss of some three quarts of blood. The doctor called next day, found his patient comfortable, and apparently much better. He requested the defendant, if his (plaintiff's) services were needed in future, to let him know it.

On the 10th of January, the twelfth day after confinement, the doctor was requested to see her again. He found her weak, with a continuance of the lochial discharge, and prescribed tonic and astringent medicines, with enemata for the bowels, which general course was continued until the 14th, when she appeared somewhat improved.

The doctor, having occasion to be gone from home a few days, requested the defendant, if necessary before his return, to call Dr. Lathrop, which he did on the 16th. Dr. L. made the necessary prescription, in his judgment, and the next day Dr. Hesse, having returned, called in company with him. She was suffering some pain, with general uneasiness, and had had a somewhat offensive discharge, which prompted the doctors to make a vaginal examination, resulting in the removal of some coagula, similar to that which had preceded it on the 13th and 14th. No very alarming symptoms were manifest at this time, and, indeed, none particularly so until the 21st or 22d, when she fell off rapidly until death supervened, as above, preceded by a general anæmic condition, and partial paralysis toward the close of life.

On the trial before the justice, as well as Circuit Court, the prescriptions sent to the druggist by Dr. H., as also the other recommendations to midwife and nurse, were all produced in evidence, showing a rather more than ordinary degree of attentiveness, and an unexceptional practice from the commencement to the conclusion of the case. The jury in justice's court rendered judgment for the amount of the doctor's account, and in utter defiance of the exceeding baldness of the defence, the case was carried to the Circuit Court, only to be confirmed, occupying four or five days in the examination, at an expense to the tax-payers of the county of over $300, besides services of judge, clerk and stenographer, and to the parties a much larger sum for counsel, witnesses, &c.

Charge.

Gentlemen of the Jury,—This case has occupied the attention of the court for four days, a time disproportioned to the amount in dollars and cents involved in the controversy. The money claimed, however, is of trifling concern compared with some questions which the demand of the money has introduced for your consideration. The defence set up makes it necessary to decide questions of great moment to the public, as well as to the plaintiff.

He was employed as a physician by the defendant, to treat his wife immediately after childbirth. He treated her, and is entitled to recover therefor $32, unless it appears from the testimony that he does not deserve any compensation, by reason of failing to perform his professional duty. The defendant defends solely on the ground that the plaintiff did not perform his services, as a physician, with due care, diligence and skill, and that by reason of such carelessness and want of skill, his services were of no value. To decide whether the plaintiff failed in his duty, it is important that the jury have as definite a rule as can be given, in respect to what is required.

A physician is not a warrantor or insurer of a case, and he is not to be tried by the result of his remedies. His only contract and duty is to treat the case with reasonable diligence and skill. (22 Penn. St., 261; 3 Wis., 416.) He is bound not only to use such skill as he has, but to have and employ a reasonable degree of it. (31 Barb., 534.) While the law will not countenance quackery, it does not require the most thorough education nor the largest experience. He who professes to adhere to a particular school of practice, must come up, at least, to its average standard, and must be judged by its tests, and in the light of the present day. (Shear & Red. Negl., pp. 490–2, secs. 435, 437.)

It is not claimed that the plaintiff did not possess the requisite skill, but only that he did not use it. What is reasonable diligence and care in a particular case depends on its circumstances; on the occasion for exertion which these circumstances suggest, to avoid possible evils—depends on the serious character of those evils, if they are permitted to occur, and the imminence of the danger. A disease known to be rapid, or a condition known to be critical or dangerous, will require more instant and careful attention and application of remedies than one comparatively harmless and only requiring good nursing. (Id., sec. 438.)

The common law has a peculiar regard for human life, and for this reason exacts a greater degree of care in respect to it than in relation to any mere matter of property. Accordingly, the law requires from all persons, including those who render gratuitous services, at least ordinary care for the safety of life; from those who render services for compensation, great care. (32 Barb., 657.) These are general principles; they may be stated more definitely in connection with particular cases.

A physician employed to take charge of a woman in childbed has two general duties to perform with care and diligence; first, to ascertain and keep informed, as far as practicable, of the condition of his patient, and, secondly, to direct the administration of suitable remedies to promote recovery. The first duty, that of ascertaining the condition of the patient, is not an absolute duty, but a duty to use the means and methods for that purpose sanctioned by science and experience, as understood by well-instructed practitioners of the same school, and to pursue the inquiry and examination with reasonable thoroughness. He is not answerable for the error of an enlightened judgment, but he cannot interpose his judgment contrary to that which is settled. He must apply without mistake what is settled in his profession; he cannot try experiments with his patients to their injury. (Shear & Red. Negl., sec. 440; 19 Rick., 333; 11 Cush., 397.)

We are reminded by the evidence, showing the great complexity of the human organism, that "we are fearfully and wonderfully made." Every present or threatened derangement is not at once manifest; certain conditions may be readily ascertained; others must be inferred—arrived at by reasoning; judgment must be exercised. What are the safe conditions of a woman just delivered of a child have been stated with unanimity and precision by the experts. There is required, first, the complete removal of the placenta, with the usual membranous attachments; and, secondly, prompt measures to prevent all excessive loss of blood. It is agreed by all the witnesses, that at the time of the plaintiff's first visit he promptly arrested the flow of blood; but it is insisted on the defence that there was a subsequent loss, impoverishment or poisoning of blood, in consequence of the first requisite not being duly attended to.

When the physician has an opportunity to examine the placenta discharged, it is conceded that, by inspection, he can decide with certainty whether it is intact, or any part detached so that further examination is required; and it is agreed on all hands that this means of information is very important. If this is neglected, or is impracticable, other satisfactory tests may be resorted to.

The jury will have to decide whether the plaintiff was, in this part of his duties, reasonably diligent. Was he prevented from examining the placenta by its removal beyond reach before his arrival, or was he so informed in answer to his inquiry for it? If so, did he diligently pursue his investigations otherwise, by acting on the information from the midwife, and the results produced and the conditions ascertained by abdominal manipulation? If he pressed his inquiries and his examination far enough to form a reliable judgment, or such as thoroughly educated physicians would ordinarily, under like circumstances, form and act upon, he cannot be held responsible for coming to an erroneous conclusion, though other tests might have been used and were not.

The same rule of duty applies to his subsequent oversight of the case. And his treatment of the patient otherwise, in all the stages of illness, including the application of remedies, must be characterized by reasonable care and competent skill, tried by the average standard of educated practitioners.

If the patient died from the effects of a loss of blood at the time of delivery, and afterward; or the failure of medicines, or the omission of medicines, to invigorate her, still, if the plaintiff used reasonable care and diligence, considering the nature of the case, and the general state of medical knowledge and experience, he performed his duty, notwithstanding the result. So, should the jury find that in some parts of the plaintiff's treatment there was a want of diligence or skill, but the prejudicial effect was slight and temporary, and was not the obstacle to the recovery of the patient, and did not contribute to her death, it may be disregarded. It is a self-evident proposition that negligence which does no injury cannot be the basis of an action, nor detract from the value of otherwise meritorious services.

On the other hand, should the jury find that the defendant's wife was in a condition, from time to time, which the plaintiff could have ascertained by reasonable diligence and skill, and he failed to ascertain her condition, or, after having learned her condition, if it appears that, by a diligent exercise of reasonable skill in the use of remedies well known to educated physicians, he could have saved the patient, and by failing in this due administration of remedies, his treatment was unsuccessful, he cannot recover.—*Detroit Review of Medicine and Pharmacy.*

ON METHYL-ETHYLIC ETHER AS AN ANÆSTHETIC FOR SHORT OPERATIONS.

By Benjamin Ward Richardson, M.A., M.D., F.R.S.

In introducing the subject before the Medical Society of London on the 14th of March, the author explained that within the past two or three years a practice had been sought for producing quick insensibility, which should be followed by equally quick recovery. Two agents had been employed for this purpose: nitrous oxide gas, and bichloride of methylene. Accepting that the principle of producing quick insensibility had a practical intention and usefulness, Dr. Richardson said he had objection to the methods which, up to the present time, were adopted for carrying the principle into practice. His objections to nitrous oxide gas were as firm as ever. He held still, that the employment of an agent which excluded all atmospheric air during inhalation, which produced the most perfect asphyxia, which required for its administration costly and troublesome apparatus, and which, if administered beyond a given period, even for a few seconds, must of a necessity kill, was a bad agent for anæsthetic administration—was, in fact, a rude and vulgar process, retrogressive in science.

Respecting bichloride of methylene, though it was hard to speak against any application of a remedy which he, the author, had introduced, he must be candid and say that he was not favorably impressed with the application of bichloride for *quick* general anæsthesia. That it was marvellously rapid in its action was true, that it answered the end it had in view was true, and that it had now been used for rapid inhalation an immense number of times was also true. But these facts could not conceal the further and all-important fact, that the bichloride of methylene belonged to a dangerous family of chemical substances, and could not, therefore, be played with without risk. It had been extolled as being safer than chloroform, and that was allowed; for as it contained an equivalent of chlorine less than chloroform, it was materially safer, but the safety was relative, not absolute. Under these impressions, the author was led recently to review experimentally the action of the whole of the more promising anæsthetic fluids and vapors, including chloride of methyl, bichloride of methylene, chloroform amylene, hydride of methyl-ethylic ether, methylic ether, and some others, which were given on a table placed before the society. The result was that he had decided in favor of methylic ether for rapid anæsthesia. The anæsthetic properties of methylic ether were first discovered by Dr. Richardson, in 1867, and the substance has been reported upon by him in two reports to the British Association for the Advancement of Science. On the 20th of May, 1868, he inhaled it for the first time himself, Dr. Sedgwick and

Mr. Peter Marshall administering it to him to complete insensibility. He was narcotized completely in one minute, was unconscious in seventy seconds, and recovered almost instantaneously without nausea, headache or other unpleasant symptom. From that time the author has been in the habit of narcotizing occasionally with methylic ether, and recently with marked success.

The ether is made by digesting one part of pure methylic alcohol with two of strong sulphuric acid. The mixture is heated, and the methylic ether, which passes over as a gas, is subjected to frequent washings in strong potassa solution. The ether remains as a gas even below zero; it has an ethereal odor; it is chemically an oxide of the radical methyl; its vapor density is 23, taking hydrogen as unity. The strongest objection to methylic ether is that it is a gas, but, happily, the difficulty is to a large extent overcome, the gas being very soluble in various substances; water takes up thirty-seven volumes of the gas, yielding an ethereal fluid of very pleasant taste; pure ethylic ether and alcohol take up over 100 volumes, and chloroform and bichloride of methylene nearly as much. For practical purposes the author prefers absolute ethylic ether of sp. gr. ·720, and boiling point of 920° F. as the solvent. The ether is charged with the gas at a temperature of 32° F., and the compound is at once bottled and firmly corked down. It should be kept for a time before being used, the process of keeping producing a comparatively stable compound. In using this compound, which he proposes to call methyl-ethylic ether, the author at present employs the simple mouthpiece invented by Mr. Rendle, and made merely of leather. He is adding to this a reserve bag, in order to conserve the ether. From one to two drachms may be put into the inhaler for quick narcotization.

Dr. Richardson next described cases in which the methyl-ethylic ether had been administered to the human subject for the extraction of teeth; in eleven cases the whole operation, from commencement of the inhalation to the complete recovery, was under three minutes; in several cases one minute was sufficient, while in two cases forty-five seconds sufficed. In no case was there spasm, syncope, or asphyxia during inhalation, or any after nausea, and in all cases there was a semi-consciousness, so that the patients did what they were bade to do, remembered what had been done, and yet were not conscious of pain.

The author next described the action of methyl-ethylic ether on the nervous centres, comparing it with chloroform and other anæsthetics containing chlorine. He showed that this ether produced no excitation of the nervous centres which supply the vascular system as chloroform does; and that, consequently, there was absence of muscular spasm, of contraction of bloodvessels and of syncope from fatal contraction of the heart. When it was carried to the extent of arresting life in the inferior animals it produced death by paralyzing the organic nervous centres. This extreme result was preceded by convulsive action, similar to that which is seen in death from hæmorrhage, the convulsion being due to the absence of arterialized blood in the muscles. So well, however, did the heart still retain its power, that in one case, in a lower warm-blooded animal—a guinea pig—the respiration returned *spontaneously* in pure air four minutes and forty-five seconds after it had ceased. No fact could more definitely speak in favor of the safety of this agent.

In conclusion, the author said that as he had confined himself this time to rapid anæsthesia for short operations, his remarks must be taken as bearing on that subject only. He had introduced methyl-ethylic ether as the readiest and best agent he knew of for the purpose described. It was better than nitrous oxide gas, because it allowed air to be given with it, and did not asphyxiate; it was better than bichloride of methylene, because it did not produce muscular spasm and syncope. At the same time he did not consider it as perfect, nor should he consider general anæsthesia perfected, until he or some other observer shall discover an agent that will destroy sensibility without interfering at all with organic muscular life, volitional power, or consciousness. Methylic ether approached this perfection, though it did not touch it, and it encouraged perseverance in experimental research. For these reasons it was worthy the attention of the society.

Dr. Richardson again brought this subject before the Medical Society of London on the 21st of March. He dwelt upon the value of methylic ether as a general anæsthetic, recording his experiences of it during the last eight days. He mentioned the difficulties he had encountered, first in keeping the methylic ether in solution, and secondly in method of administration, and explained how these difficulties were to be met. Respecting method of administration, he said that the ether must be confined in a bag, in connection with the inhaler, and from the bag it must be volatilized, by means of a hand bellows. The instrument for this purpose was shown; the elastic bag contained layers of domette to receive the ether. By this means all the ether was utilized, and usually two drachms would be found a sufficient quantity. Dr. Richardson reported, that since the last meeting of the society he had administered the ether seventeen times, and with a success quite equal to his expectations. The ether produced quick relaxation of the muscles, with dilatation of the pupils, and this last was a good test of insensibility. The blood which flowed during an operation retained its arterial hue, and there was no sign of asphyxia, or of vomiting. Recovery was rapid, and methylic ether promised to be the best and safest of anæsthetics. In prolonged operations it might be advantageously mixed with bichloride of methylene, the two fluids being in equal parts. The effect of bichloride in causing spasm and vomiting was greatly controlled by the ether.—*The Med. Press and Circular, Dublin, March* 30, 1870.

Reports of Medical Societies.

BERKSHIRE DISTRICT MEDICAL SOCIETY. F. K. PADDOCK, M.D., SECRETARY.

Regular monthly meeting at Pittsfield, June 29th, 1870. In the absence of the President, Dr. C. T. Collins, of Great Barrington, took the chair.

The following letter from Prof. O. W. Holmes was read to the Society, being an answer to the resolution passed at the last meeting of this Society, requesting Prof. Holmes to publish his anniversary poem.

"Boston, Mass., June 6th, 1870.

"My Dear Sir,—The unexpected and flattering request of the Berkshire District Medical Society has overcome certain scruples I had about publishing a piece of verse, meant, like the bouquets of the dinner table, to serve the need of the hour and then be cast aside. I had successfully withstood the golden-mouthed eloquence of an enterprising Editor, but I cannot refuse the request of my old friends, the Berkshire physicians. The poem shall soon be printed, in an easily accessible form.

"My friends must not hold me responsible for the opinions of either the young or the old doctor who took part in the consultation I have commemorated. It is as true in medicine as in language,

> Multa renascentur quæ jam cecidére; cadent que
> Quæ nunc sunt in honore——,

but I should be sorry to find myself in the company of those good people whose frequent use of the phrase 'there is no new thing under the sun,' is all they have about them to remind us of Solomon.

"A naturalist might indeed suggest that medical beliefs propagate themselves by a kind of alternate generation, so that if one age is afraid of *sthenia*, the next is like to be just as fearful of *asthenia*, and thus medical practice swings backward and forward between the two poles of the professional creed, represented by brandy and bloodletting. Like the two personages in Pilgrim's Progress, one generation keeps pouring on water to quench the fires of fever, and the next generation is as diligent in pouring on oil to feed the flame of it.

"But after all, if the pendulum of belief does not swing through a pretty wide arc, the hands of progress will hardly be kept going. And it must not be forgotten that in seeming to return to old beliefs, we find that, under the same names, we hold them in a different aspect. If the lancet gets into common use again, much less will be expected of it with our present views of inflammation. If calomel comes again into fashion, we shall hear less about its action on the liver, and less especially of that gorgeous phrase 'unloading of the portal system,' since the report of the Edinburgh Committee, read by Dr. Hughes Bennett at the meeting of the British Medical Association.

"The meaning of all this is, that my pictures are only good-natured caricatures, with truth enough in them, probably, to be recognized as not wholly drawn from fancy, but intended only to afford a few moments' entertainment after a banquet not in general oppressive by its hilarity.

"I am quite sure that as a token of friendly recognition of their very kind and most welcome remembrance, my Berkshire friends will look upon the printed page of this slight performance with patience if not with pleasure.

"Believe me, dear sir, very truly yours,
O. W. Holmes.

"J. F. A. Adams, M.D.,
Sec. pro tem. Berkshire Dist. Med. Society."

Dr. Smith, of Pittsfield, reported a case of chronic pneumonia in a carpenter aged 50 years.

Dr. Reynolds, of Richmond, reported a case of *Diabetes Mellitus* in a man aged 60. He now passes three quarts of urine in the twenty-four hours, and the yeast test shows a considerable amount of sugar. The patient is improving, the quantity of urine is diminished, and micturition at night is no longer necessary. His strength, however, is failing. The appetite is good, and the bowels regular. Thirst considerable. Has been kept upon a meat diet, without vegetables, and treated with morphia, quinia and strychnia.

Dr. Seymour, of Hinsdale, related the case of a boy, seven years old, apparently not inheriting a tuberculous tendency, who took cold while skating, and solidification of the left lung followed. The case did not yield to treatment, and he died at the end of a year. Dr. Seymour considered this a case of tubercle resulting from chronic pneumonia, and a good illustration of Niemeyer's views of tuberculosis.

Dr. Mercer, of Pittsfield, remarked that he has now under treatment a case of consumption, with cavities in both lungs, resulting from chronic pneumonia; and that he has had three others of similar character. In none of them was there a family tendency to phthisis. A remarkable fact concerning the first mentioned of these cases was this: the patient was a married woman, and took cod-liver oil. While taking it, she had uterine hæmorrhage from a miscarriage, and oil with the cod-liver odor could be skimmed from the surface of the blood discharged. This fact was received with incredulity by the Society.

Dr. Collins, of Great Barrington, reported a case of *Abscess of the Liver* in a lady, aged 38, married seven or eight years, without children. The attack began with daily chills, followed by fever and enlargement of the liver, which soon gave evidence of an abscess. This was opened by Dr. Collins with a bistoury, between the crest of the ilium and the ribs on the right side, and discharged two quarts of pus, weighing four pounds. Since then, about four ounces of pus has been discharged daily, the quantity diminishing a little. The case is treated with tonics and stimulants. A four-ounce mixture of equal parts of carbolate of iodine and rose-water is injected daily into the abscess.

Dr. Miller, of Stockbridge, reported the case of a clergyman, 54 years of age, who, thirteen years ago, received a severe blow upon the head. He has ever since been subject to severe attacks of pain in the head, at the seat of injury, attended with numbness of the left side, without loss of consciousness. He has been treated by Dr. Miller with hydrate of chloral, in ten-grain doses, when the attack is anticipated; with valerianate of zinc internally, and an ointment of aconite and belladonna. Under this treatment, he has greatly improved; and the benefit derived from the chloral is very marked.

Dr. Phillips, of Cheshire, reported a case supposed by him to be *Ulceration of the Duodenum*, which he has treated with tonics and alteratives. The most benefit has been derived from nitrate of silver, one-eighth grain doses, in pill form.

Dr. Adams, of Pittsfield, reported a case of hæmorrhage from *Uterine Inertia*. The patient was taken in labor with her sixth child, very suddenly; and had but two pains, the first of which ruptured the membranes, and the second expelled both child and placenta. On his arrival, Dr. Adams found the labor completed, the uterus well contracted and the loss of blood inconsiderable. He applied a binder, and gave a dose of ergot, waited an hour, and then went away. Immediately after, he was sent for in haste, and found the patient faint, pale and nearly pulseless, from hæmorrhage which had come on suddenly and profusely with vomiting. On examination, the vagina was found full of clots, and the uterus dilated and also full of clots. These were removed, and the hand retained in the uterine cavity to excite contraction, while the other hand grasped the fundus externally. But now the patient vomited again, coincidently with which the uterus was felt to dilate about the hand, and a copious gush of blood ensued, attended with temporary syncope. The bleeding soon ceased, but the uterus was very slow in contracting, and when once contracted, would immediately and repeatedly become flaccid again. Several doses of morphia followed by ergot were given; and the hand kept on the fundus, making irritation by stroking or grasping for five hours, when the uterus at last became well contracted. The patient made a good recovery.

Dr. Paddock, of Pittsfield, made some remarks upon *Hydrate of Chloral;* he had used it considerably. He reported a case of dysmenorrhœa complicated with hysteria, where he had prescribed 15 gr. doses of the hydrate of chloral to be taken at bed-time, and repeated every half hour till sleep was obtained. The first night, a single dose occasioned an entire night's rest. The second night, four doses were administered, at intervals of half an hour, without producing freedom from pain or sleep till soon after the last dose, when the patient became semi-unconscious, the skin cold and pallid, covered with a clammy perspiration; respiration almost imperceptible; pulse very slow and exceedingly weak, and occasionally a shiver or muscular tremor passed over the body. A few large doses of brandy fully restored the patient. Dr. Paddock has used the hydrate in several cases of delirium tremens, with the most happy results; and in cases of simple sleeplessness, in which bromide of potassium fails, this remedy usually acts as a delightful hypnotic. He uses Schering's German Chloral, dissolved in water.

He also reported a case of *Quotidian Intermittent Fever*. The patient, a girl, fourteen years of age, a native of Alabama, arrived in Pittsfield about May 1st. She had never had intermittent; but two weeks after her arrival, had her first chill, soon followed by high fever, and this by the sweating stage. This took place for several successive days. A dose of hydg. cum cretâ was given at night, followed by a Seidlitz powder in the morning, and then one grain of quinine every hour for the six hours previous to the time of the expected chill was ordered. Slight cinchonism was produced, after the fifth dose, and no more was administered. From that time she has had no return of the disease.

Bibliographical Notices.

The Indigestions; or Diseases of the Digestive Organs functionally Treated. By Thomas King Chambers. Third American Edition, Revised. Philadelphia: Henry C. Lea. 1870. Pp. 383.

This is a new edition of a well-known work. The second edition was published in England in 1867. That edition is not yet exhausted, and the third edition appears now only in America. The number of cases has been increased, 355 being recorded in this against 227 in the second edition. The order is somewhat changed, and the titles of some of the chapters are different. The added cases are incorporated with the body of the work, and in comparing the two editions many parts seem to be almost re-written. It may well be supposed, then, that this valuable work has gained much from the additional experience of its author. W.

Transactions of the Medical Society of the State of New York. Albany: The Argus Company, Printers. 1869.

The most interesting papers and reports presented were those included in the following list. Want of space forbids an extended notice of each.

1. A Practical Treatise on Acupressure. By Joseph C. Hutchinson, M.D.
2. Spontaneous Lithotomy. By Alden March, M.D.
3. On the Result of Consanguineous Marriages. By Robert Newman, M.D.
4. Vesico-vaginal Fistule and its Successful Treatment by the Button Suture. By Nathan Bozeman, M.D.
5. Trichina Spiralis. By E. R. Hun, M.D.
6. Glaucoma. By Henry D. Noyes, M.D.
7. Medical and Surgical Experience in Asia Minor. By Henry S. West, M.D.
8. On External Perineal Urethrotomy. By J. W. S. Gorley, M.D.
9. On Conium Maculatum. By Willam Manlius Smith, M.D.
10. Placenta Prævia. By C. C. F. Gay, M.D.

Medical and Surgical Journal.

Boston: Thursday, August 11, 1870.

EXTERNAL ŒSOPHAGOTOMY.

We have had placed in our hands a work by M. L. Felix Terrier, of Paris, entitled "L'Œsophagotomie Externe," which is worthy of notice, not only for its faithful and careful discussion of the subject, but for the full credit which it gives, throughout, to the labors of American surgeons.

One end which the author has sought to obtain is to show to surgeons that Œsophagotomy, properly so called, or External Œsophagotomy, is an operation relatively simple, the details of which are not difficult, nor is it dangerous to the patient. His observations lead him to believe that the operation gives a very fair proportion of successful results; in 31 observations performed either for the removal of foreign bodies or for strictures, but 10 were followed by death. Moreover, in the greater number of these cases, death was not due to the operation itself or its sequelæ, but rather to the previous exhausted condition of the patient or other concurrent accidents. The author does not mean to affirm that Œsophagotomy should always be performed, whenever a foreign body becomes impacted in the upper part of the œsophagus, or in all cases of stricture in the same region and giving rise to alarming symptoms. As with all operations, it has its indications and its counter-indications – but M. Terrier believes that the arguments in favor of the operation and for its more frequent employment are stronger than have been generally supposed. Surgeons have been deterred by the belief that the operation is a difficult one ; M. Terrier endeavors to show that this impression is a false one, and that the operation deserves more careful study and experiment than it has received.

His work is divided into two principal chapters : in the first he examines the indications and contra-indications of Œsophagotomy in the removal of foreign bodies ; in the other, in the treatment of strictures of the canal. Other chapters are devoted to a complete history of the operation ; to the methods of operating of different surgeons ; to some information obtained by experiments on animals ; and finally he cites the details of eighteen cases in the practice of surgeons not resident in France, and the table of cases collected by Dr. Cheever of this city.

According to Velpeau, the suggestion of opening the œsophagus, for the removal of foreign bodies, is much more ancient than has been thought to be the case, and the appearance of abscesses in the neck, containing needles, bits of bone, &c., which have been stopped in the œsophagus, have, in times past, suggested to surgeons the method of operating. Verduc appears to have been the first to propose the operation. He thus expresses himself in 1643, in his Traité de Pathologie Chirurgicale : " But, if the foreign body cannot be removed by any of the means employed and the patient is in danger of strangling, I think the operation of making an incision into the œsophagus is justifiable. * * * I have said that the operation is a *difficult* one, but I think it better to try it, than to see the patient die before one's eyes." He however limited the indication for the operation to those cases only which were in imminent danger of suffocation.

In 1747 Guattani wrote an article on the subject in the Mem. de l'Acad. Roy. de Chirurgie, relating his experiments on dogs and other animals. He advised that an incision should be made on the median line and the œsophagus reached by pushing the trachea to one side. During the latter part of the last century, the subject was treated by various surgeons, most of them French, with different opinions as to the gravity and advisability of the operation.

The first important work on Œsophagotomy in the present century is the memoir of Vacca Berlinghieri, which appeared at Pisa in 1820. He proposed a new method of opening the canal, using an instrument which he called ectœsophage, by the introduction of which he caused the wall to bulge out, and, with this aid, he then reached the œsophagus between the upper and lower thyroid arteries. Bégin, first gave definite rules for the performance of the operation, based on his own practice and his observations. He modified the methods of Guattani and Boyer, and penetrated between the trachea and the infra-hyoid muscles on one side, and the sterno-mastoid, carotid, jugular, and the pneumogastric and sympathetic nerves on the other ; he suggested the division of the omo-hyoid muscle, which crossed the wound obliquely, and, reaching the œsophagus, he made the incision on the left side, parallel with its axis. Bégin did not employ the sound, nor the instrument of Vacca, on account of the difficulty of introducing them and maintaining them in place ; a difficulty which the modern use of anæsthetics has partially freed us from. He stated that the external wound should not be united, and, in place of restricting the diet of his patients, he nourished them well, by means of the œsophageal tube, during the first few days after the operation.

In 1832 Arnott, in 1837 Germain, in 1840 Velpeau and others wrote on the subject.

In 1848 Lavacherie read an interesting memoir before the Belgian Academy of Medicine, in which he introduced a table showing a series of results following the presence of foreign bodies in the œsophagus. Of 83 cases, 18 were speedily fatal ; in 17, death resulted from different sequelæ at a longer or shorter interval ; 12 cases of death occurred by hæmorrhage ; 26 were followed by serious ill results, though not fatal ; and 10 by abscess with escape of the foreign body in that way.

In 1844, the operation was performed by Dr. Watson in New York, and reported by him in the Dublin Journal.

In 1854, Demarquay performed the operation for the removal of a piece of money from the œsophagus, and the same was communicated to the Société de Chirurgie, with the valuable observations of that surgeon and of M. Denonvilliers.

Since this time the opportunities for observation have been more frequent, and much has been written on the subject. M. Terrier expresses the obligations he is under to Dr. Cheever, of Boston, for his study of the subject in America; he makes frequent allusion to his monograph, and copies in full the three cases cited by Dr. C. In reference to the table in Dr. Cheever's monograph, which was criticized in this country as being inaccurate and incomplete, M. Terrier says:—"Drs. Cheever of Boston and L. Voss of New York have collected in a table all the cases of œsophagotomy which they have been able to find—a table very complete in itself; so that, notwithstanding all our investigations, we have not been able to add any new cases." This table has recently been copied into the second edition of Holmes's System of Surgery. M. Terrier also frequently mentions Dr. Hitchcock, of Fitchburg, and gives, in detail, a successful case in his practice, and also one operated on by Dr. McLean, of Louisville.

Before deciding on œsophagotomy in cases of foreign bodies, all authors counsel careful attempts to extract the intruder or to push it on to the stomach. This advice, excellent in itself, leads at once to an important question—the determination of the exact position of the body. It is not always that the use of the bougie can determine its precise locality. In the first observation of Dr. Cheever, the sponge twice passed beyond the painful point, which corresponded with the cricoid cartilage, and which was, in fact, the position of the foreign body, as was afterwards shown. In his second case, a similar result was obtained. The patient was supposed to have swallowed a bit of bone, but the sound did not meet the least obstruction in its passage through the œsophagus. M. Terrier asserts that exploration with the œsophageal sound, armed with a sponge, should always be made; but, if the indications which it furnishes are negative, it is not necessary to believe that a foreign body has not been arrested in the œsophageal canal. If the foreign body causes very intense nervous phenomena and attacks of suffocation, which appear to be due rather to a reflex excitement than to any mechanical action, the propriety of surgical interference becomes difficult to decide and the use of the sound is hardly possible. This difficulty has been noticed by Bégin and various other authors. A singular fact has been noticed by Dr. Cheever and others that the passage of the sponge has, at times, relieved the patient, as is shown by the momentary cessation of the spasm of the œsophagus.

In brief, when a foreign body has been arrested in the œsophagus, it is the duty of the surgeon carefully to study its character and position. If it is irregular and has sharp angles, one must be on his guard in manipulating it, and the danger of its prolonged presence in the canal is a point of grave consideration. If the body is high up, an attempt should be made to remove it by the mouth; if low down, to cause its passage into the stomach.

If neither of these simple operations quickly succeed, it is highly injudicious to continue the attempt. The prolonged use of the instruments causes a spasmodic contraction, which increases the morbid phenomena, and renders the subsequent attempts more difficult and painful; moreover, it induces a pathological condition of the œsophagus, which renders its after treatment hazardous. As a surgeon should not quit an irreducible hernia, without operation, so he should not leave a patient, having a foreign body in the œsophagus, without removing it by one of the simpler methods—or by performing the operation of œsophagotomy.

As a method of treatment in strictures of the œsophagus, this operation has been less frequently used. In the majority of those cases the operation is, of course, merely a palliative one, only serving to relieve the sufferings of the patient for the time being. In certain cases, not of a malignant character, an opportunity is given the surgeon of treating the stricture by dilatation, and thus the patient has the chance, which this method offers, of permanent relief. This operation, however, would hardly suggest itself, except as a last resort; but it should receive greater encouragement than has been hitherto accorded it.

In the following chapter, M. Terrier examines in detail and criticizes the methods of operating of the various surgeons who have written on the subject. He arrives at the result that, except under special conditions, the opening should be made at a place of election corresponding nearly with the crossing of the supra and infra-hyoid arteries. This point was also determined by Bégin.

Dr. Gross, of Philadelphia, advises using sutures to close the wound made in the œsophagus. This plan was adopted by Dr. Cheever in his reported cases. M. Colin suggests the suture of the mucous membrane alone in closing the œsophagus; he states that it is the easiest method and is followed by the best results. He employs a fine waxed suture. With this method, the saliva passes down the œsophagus and does not escape among the tissues. The laxity of the sub-mucous tissues allows the movement of the œsophageal walls without disturbing the wound. The next day liquids may be used, and, in a few days, the thread passes off by the œsophagus. But, notwithstanding the use of sutures in the œsophagus itself, the external wound should not be closed, on account of the danger likely to arise from infiltration of fluids and perhaps of alimentary substances into the loose tissues of the neck.

M. Terrier devotes a valuable chapter to the experiments which have been made on animals at the Veterinary School at Alfort; strangely, however, the experiments on animals have been much less successful than those made on the human subject.

He closes by giving a series of conclusions, having the same general bearing as we have already stated, with the account in detail of operations done by surgeons, and the table of Dr. Cheever, already mentioned.*

Massachusetts General Hospital.—We take great pleasure in announcing a recent magnificent gift to the Mass. General Hospital, by its Senior Surgeon, Dr. Henry J. Bigelow, of a complete set of Surgical Instruments, selected or made expressly under his direction in London and Paris, during his late visit, and arranged in cases specially designed for them. They are of the newest and most improved forms, and constitute a complete surgical apparatus for the Institution. In addition Dr. Bigelow presents a permanent fund for their renewal, and subscribes for a Free Bed for five years, the whole donation amounting to the sum of five thousand dollars. The Board of Trustees, in accepting his gift with gratitude, write, that in acknowledging his very generous additions to the present means of the hospital, they take great pleasure in assuring him that they are valued not only as promoting the humane purposes for which the hospital was founded, but also as indicating his personal and professional interest in the Institution with which he has been for so long a period prominently identified. They state that, although the usefulness of the Hospital is chiefly due to the labors of its professional staff, they believe, with Dr. Bigelow, that much more good could be accomplished with increased resources.

The Speculum.—Our attention has been called by a correspondent to the great frequency with which this instrument is used, often needlessly, and, in far too many cases, in young impressionable females, where only absolute necessity should call for such an investigation. It is especially the young members of our profession against whom our correspondent directs his remarks, for he says: "There are rumors and statements going abroad, which deserve attention, that young unmarried girls, not of doubtful character, but strictly virtuous, are often tampered with, so as to allow the introduction of the vaginal speculum. * * * I am told that visitors in the families of these victims of quackery (?) are often invited and urged to see the evidences of disease, real or imaginary. I do not know how a remedy for these evils can best be applied, but there should be no delay in doing anything possible for this object; and for those guilty of such degradation, language is hardly capable of too severe denunciation."

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* [We had completed our material for this week, when Dr. Atherton's case was handed to us. Its opportune reception enables us to add another example to the history of Œsophagotomy.—Editor.]

In these days of poly-speculation, when we seem jumping out of the swaddling clothes which our forefathers left about us, and are disposed to submit each organ of the body to every species of investigation which the fertile brain of man can devise, it would be strange indeed if we did not assume too frequently to throw light on regions where light need not go. Grant that that we need more knowledge of the diseases of woman, as we do of every other branch of disease, and that so many of her ailings are due to pathological conditions of the organs of generation; grant the assertions of those who have come from the schools of Europe in reference to the facilities for observation enjoyed there, and their complaints that the hospitals and dispensaries here do not offer them similar advantages; grant this, and, notwithstanding, we do not hesitate freely to say that vaginal examinations *are* too frequently and unnecessarily made. The glory of a true woman is that shrinking delicacy of feeling which dreads exposure, in whatever way it may come; her only shame, its loss. She comes to her physician as a confidant to a friend, and every needless exposure serves only to blunt the sensitive nature which is her sex's heritage, an exposure we have no *right* to ask her to submit to.

Of those who would compare Europe with America in its clinical advantages in this respect, the question might well be asked if, on comparing the mental, moral and social condition of the peasant class, of Austria, for instance, with that of even the lowest class among our own native population, any friend of humanity would, for the sake of instruction, place our own women on the plane of the European.

This is no new subject; it has been thoroughly discussed at various times; but we cannot refrain from expressing the views which we entertain, and which are suggested by our correspondent. So far as may be *necessary* to ascertain the cause of disease in our patient, so far as may be advisable for the absolute *needs* of clinical instruction, is it our privilege to use the speculum, and even then only in such a manner as may preserve those feelings which are the *right* of woman.

"True clinical teaching like this would meet with full approval from all who wish well to medical education; but to uncover an unfortunate woman in a college amphitheatre in presence of a hundred or more students, is a proceeding the agony of which is not compensated by any adequate advantage to the class."*

We find this ulceration on our professional os so well touched up by our cotemporary, the senior Editor of the Pacific Medical and Surgical Journal, that we cannot help giving a quotation from his remarks, to close the subject.

"Now let us come home and bring to judgment a sin in the family. Within the profession there is a species of quackery which is advertised, not by the printing press, but by the uterine speculum. There prevails very extensively among our women a singular disorder, of which the most prominent symptom is a passion for uterine explorations. To some extent medical practitioners are responsible for the general prevalence of this malady. It is easy for sensitive females to persuade themselves that their afflictions, from the toothache downwards, are due to falling of the womb, or ulcerations or tumors; and he is the sharpest doctor who first detects the difficulty. Here comes in the charlatan, to exaggerate the disease, if there be any, and to beguile the patient with promises of cure. Henceforth the speculum becomes to the poor woman an essential part of the daily routine of life. Caustic, the knife, and various manipulations, look like work; and she is charmed with the industrious and energetic attentions of the professional mechanic. By and by the bubble bursts; and for all the good that has been done by subjecting the uterus to a course of torture, its proprietor might as well have adopted the treatment accredited to that miracle of scientific skill, Li-potai, namely, the application of a blister to the crown of the head to raise the fallen womb to its place.

"It is to be hoped that the fashion of women to mistrust and slander their wombs and rejoice in having them explored and tinkered, has passed its culmination; and with it the professional mania for persecuting that organ. The highest authorities have taken the back course and condemned their own uterine surgery in some respects. We may therefore indulge reasonable expectation that the uterus will shortly withdraw from public exposure, and regard the decencies of private life."

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* Medical Gazette, March 5, 1870.

PROF. ALPHEUS B. CROSBY, of the University of Vermont, has accepted the chair of Surgery in the Long Island Hospital College, Brooklyn, N. Y. Prof. Crosby is a gentleman of ability as a teacher, and will be a valuable acquisition to the Long Island College.

THE HYPODERMIC SYRINGE AS A MEANS OF DIAGNOSIS IN OVARIAN DISEASE.—By HENRY F. WALKER, M.D., of New York.—In an operation so grave as ovariotomy, every means of diagnosis is valuable.

So difficult is the determination of the character of tumors concealed by the walls of the abdomen, that the uncertainty of their structure has passed into a proverb. For this reason, to confirm what palpation seems to reveal as to the nature of an ovarian cyst, or seeming cyst, the operation of paracentesis has often been resorted to merely as a means of diagnosis. But this operation, usually so innocuous in removing the accumulated fluid in ascites, has often a disastrous result in tumors of ovarian origin. This is due to the different situation and character of the two fluids. In ascites the fluid is already contained in the serous cavity of the abdomen; it is bland and unirritating, effused by purely mechanical causes, and its removal gives slight tendency to inflammatory trouble; but the fluid of an ovarian cyst, if it reach the peritonæum, may act as an acrid irritant, and excite a fatal inflammation. Again, the wound made by the trocar may be the cause of death by hæmorrhage.

The means I would suggest, which possesses all the advantages of tapping with none of its hazards, is the hypodermic syringe, with the finest of needle points. This little instrument has often been used in diagnosticating purulent from serous effusions in the pleural cavity and pericardium, in detecting pus in cases of doubtful fluctuation under deep tissues, but has never to my knowledge been employed as a means of diagnosis in ovarian disease until within a few days.

The advantages it possesses are these:—1st, efficiency; 2d, harmlessness; 3d, painlessness.

1st. Efficiency.—This is undoubted in determining the nature of the tumor, whether solid, cancerous, cancroid, or cystic. By plunging in the needle and retracting the piston sufficient fluid will be withdrawn by the suction exerted for microscopical diagnosis, even though it be of the most adhesive form of colloid growth. If it be proved a cyst with fluid contents, the kind of cyst may be demonstrated in many instances, for by introducing the needle at different parts of the abdomen, and comparing the character of the fluids withdrawn, it can readily be determined whether they be drawn from a single cyst with uniform contents, or from a multilocular tumor, containing fluids of various density and composition. This tells more than the clinical history, palpation, and all other means of diagnosis combined, for it lets us look within the tumor itself.

2d. It is harmless.—The fine needle of the hypodermic syringe can be introduced even into an aneurism without danger, while the wound it makes in the sac of an ovarian cyst is so small that nature ignores it. The usual trocar makes a rent; this dissects its way between the tissues, and their contractility closes the wound.

3d. The painlessness of the operation is of less importance to the surgeon than to the patient; but to the latter, to whom the preliminaries of examination are often more irksome than the grand operation itself, it is very desirable that diagnostic procedures should be painless as well as harmless.—*The American Journal of Obstetrics.*

THE forty-fifth and forty-sixth Annual Reports of the officers of the Retreat for the Insane, in Hartford, Conn., contain a report of the alteration and improvement of the Retreat buildings. "These plans, now executed, involved a radical and thorough reconstruction of said buildings, and embraced improvements in heating, ventilation, enlargement of halls, an arrangement of a series of spacious single and also suites of other rooms, consisting of parlors, bed and bath rooms and water closets combined, all arranged and adapted for occupancy by patients, whose habits and mode of life render these extra accommodations a sort of necessity; and so arranged, that in the classification of patients, such as should desire the higher priced and extra accommodations, could have their own separate table and rooms, or be accommodated in the various spacious public dining-rooms and parlors connected with each separate hall in the institution, as each might choose.

"These improvements have now been substantially completed."

The whole number of patients in the Retreat at the beginning of the year, commencing April 30, 1869, was	135
Admitted during the year, . .	123
Total in year, . .	258
Of this number there have been discharged,	
Recovered, ...	41
Much improved, . . - .	16
Improved, ...	32
Not improved, ...	11
Died, ...	25
Total discharged during the year,	124
Remaining in Retreat April 1, 1870,	134
Whole No. admitted to April 1, '70,	5,150
" disch'd dur. same period,	5,016
" remaining, . . .	134

Of those that died during the past year, 14 were males and 11 were females.

Nine deaths were from general paralysis, 7 from acute mania, 3 from chronic mania, 2 from puerperal mania, 2 from apoplexy, 1 from epilepsy, and 1 from rheumatic fever.

A Simple, Cheap and Efficient Substitute for the Stomach Pump. By John T. Hodgen, M.D., Professor of Anatomy, Saint Louis Medical College.—About a year ago, I had a case of stricture of the œsophagus so narrow that my patient could not swallow even liquids. To sustain life I resorted to a small stomach tube (a gum catheter, in fact), as a means of injecting liquid nourishment; to this I fixed the elastic tube of one of Davidson's syringes.

On one occasion the vessel containing the liquid happened to be higher than the patient's stomach and I observed while the syringe was not being used, that the liquid continued to flow into the stomach—the action being that of a syphon. I at once, to test the syphon, substituted a simple elastic tube for the syringe, and found the stomach could be as readily emptied as filled. Thus I conceived the idea of using a syphon instead of a stomach pump, and have used the same in a case of poisoning recently with the most complete success.

I attach four feet of India rubber tubing to a stomach tube, fill both with water by simply dipping it in the liquid end first, then compressing the elastic tube between the thumb and finger to keep the fluid from running out, introduce the stomach tube, lower the outer end of the elastic tube, and the contents of the stomach pour out as readily as if from an open vessel. When the fluid ceases to flow, I dip the outer end of the tube beneath the surface of water, elevate the vessel containing it, and the stomach is soon filled; lower again the outer end of the tube and the stomach is emptied. This can, of course, be repeated as often as is necessary.

The advantages claimed for this simple contrivance are, that it may be almost always improvised, is of speedy and easy application, has no valves to become obstructed or deranged, and is less expensive than a stomach pump.

The same principle may be applied in injecting fluids into the bowels, as indeed it has been for injecting into the bladder, uterus and vagina.—*St. Louis Medical and Surgical Journal.*

Polygamy in its Influence on Population.—At the last meeting of the Anthropological Society, a paper by Dr. J. Campbell was read "On Polygamy: its influence in determining the sex of our race, and its effects on the growth of population." Minute details of the relative proportions of female to male births in the harems of the king and other important dignitaries of Siam were given. The result seems to be that the proportion of males and females born were, as in the case of monogamist marriages, entirely equal.—*British Medical Journal.*

Dr. J. H. Grant, in an article in the *New Orleans Journal of Medicine*, advocates the practice of applying physical force to the fundus uteri by means of the hands in inefficient uterine action. He closes his article with the following argument:—

That labor is a physical process, and that when the power of the organs concerned in the expulsion is inadequate to the performance of this duty, they can be exalted to any desirable extent by the application of physical force to the fundus uteri.

That this increase of power is more natural and effectual than that produced by the use of medicinal agents; and that this increase of power is in accordance with the operation of the laws of nature, and safety to the mother and child.

The judicious application of such force will entirely supersede the use of obstetrical instruments, in a class of cases in which they are now used.

Medical Miscellany.

The Harvey Statue.—Miscellaneous business being in order, the Special Committee appointed at the meeting of the 21st of February, to inquire into the expediency of recommending that a bronze copy of Horatio Stone's statue of Harvey be placed in Central Park, reported in favor of the proposition; and the Committee was, by vote of the Society, empowered to appeal to the public for funds to consummate it.—*Proceed. Med. Soc. Co. of New York*, in *Medical Record.*

Ling Wau, a Celestial charlatan, has taken up his abode in New York, and advertises not only an imported materia medica of 300 "remarkable Chinese medicines," but imported apothecaries to dispense them. In this connexion it may be of interest to remark that San Francisco custom-house authorities recently seized an invoice of "remarkable Chinese remedies," consisting of pickled monkeys, dried toads, and such like medicinal articles.—*Medical Gazette.*

St. Louis has taken the initiative in regulating prostitution; a matter which must sooner or later be taken cognizance of in all large cities. The "social evil" will always exist, and we can do little towards limiting it; but we can do something towards limiting the spread of syphilis, and it is high time that we should direct our energies to the task.—*Ibid.*

Good Advice.—In a trial at Old Bailey the other day, a Surgeon was indicted for having feloniously assaulted a woman whilst she was under the influence of chloroform. The evidence rested mainly on the statement of the woman herself, and the jury were evidently against the prisoner. The judge, however, fortified by Medical evidence, summed up in his favor, and the prisoner was acquitted. On leaving the bar, his lordship advised the prisoner never to administer chloroform to a patient unless in the presence of a third person, a piece of advice applicable to all members of the Profession.—*Med. Times and Gazette.*

Removal of the Whole Larynx.—In cases of malignant new growths in the larynx, which are beyond the possibility of extirpation, the question as to the removal of the whole larynx may be raised. This has recently been done by Dr. V. Czerny, of Vienna, who has approached this question experimentally, and shows that in dogs the operation can be performed without great difficulty, and that the loss of the larynx is not necessarily fatal to them. Even if the epiglottis have been included in the removal, the dog can swallow his food. The respiration is carried on through a canula. Dr. Czerny further experimented on the possibility of artificially supplying a dog in this condition with the means of phonation, and succeeded in this by adding to the upper part of the canula a piece with metallic tongs. Every surgeon will agree with the conclusion of Dr. Czerny's interesting paper, that only the dreadful and hitherto hopeless state of patients with malignant laryngeal growths can justify the proposal of such an operation.—*Brit. Med. Jour.*

At a recent meeting of the Paris Surgical Society, M. Marc Sée related a case of what he termed "epidermic grafting." The patient had his arm caught in some machinery, the soft parts of the anterior and external portions of the forearm and of the elbow being lacerated and crushed, the bones not sustaining any injury. The wound was dressed with pure alcohol, and its surface, after the elimination of the superficial portion which became gangrenous, was covered with granulations. M. Sée then took two small shreds of epidermis detached from the inner side of the arm by means of a lancet, and applied them to a prominent part of the wound. Some days afterwards a new graft was formed by depositing on the surface of the wound epidermic particles obtained by scraping the cutaneous surface of the arm with a lancet. The same day, M. Reverdin, an *interne*, who is the inventor of this form of grafting, applied to the wound several small epidermic shreds taken from the leg and kept *in situ* by a strip of diachylon. In a day or two these different grafts had taken hold, and soon after the epidermic islets extended and united, so as to produce cicatrization over a notable portion of the wound. The process of proliferation of epiderm cells replaces that of suppuration at the points invaded by the islets so that the process of healing is considerably expedited.—*Med. Times and Gazette.*

To Correspondents.—Communication accepted:—Surgical Operations without Pain—Whose is the glory of the discovery?

Deaths in seventeen Cities and Towns of Massachusetts for the week ending Aug. 6, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases		
		Cholera Infantum.	Consumption.	Dysentery & diarrhœa.
Boston	191	69	16	23
Charlestown	17	10	1	0
Worcester	29	7	2	0
Lowell	21	5	3	0
Milford	6	0	3	1
Chelsea	3	2	1	0
Cambridge	13	8	2	0
Salem	16	5	4	3
Lawrence	8	2	3	0
Springfield	10	1	1	1
Lynn	13	5	2	0
Pittsfield	5	1	1	1
Gloucester	5	0	3	0
Fitchburg	7	1	1	3
Taunton	13	2	5	0
Newburyport	5	0	2	0
Fall River	19	3	3	0
	381	121	53	32

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Aug. 6th, 191. Males, 97; females, 94. Abscess, 1—accident, 5—disease of the bowels, 1—congestion of the brain, 2—disease of the brain, 10—inflammation of the brain, 1—bronchitis, 1—cancer, 4—cholera infantum, 69—cholera morbus, 3—consumption, 16—convulsions, 2—debility, 4—diarrhœa, 15—dropsy, 1—dropsy of the brain, 3—dysentery, 8—scarlet fever, 4—typhoid fever, 3—hæmorrhage, 1—disease of the heart, 1—intussusception, 1—disease of the kidneys, 2—congestion of the lungs, 1—inflammation of the lungs, 8—marasmus, 5—old age, 2—paralysis, 2—peritonitis, 1—puerperal disease, 1—contracted pylorus, 1—suicide, 2—tetanus, 1—tumor, 1—unknown, 8.

Under 5 years of age, 132—between 5 and 20 years, 6—between 20 and 40 years, 21—between 40 and 60 years, 17—above 60 years, 15. Born in the United States, 159—Ireland, 20—other places, 12.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

NEW SERIES.] THURSDAY, AUGUST 18, 1870. [VOL. VI.—NO. 7.

Original Communications.

SURGICAL OPERATIONS WITHOUT PAIN—WHOSE IS THE GLORY OF THE DISCOVERY?

Communicated for the Boston Medical and Surgical Journal by CHARLES KIDD, M.D., London, England.

I FEEL that a few words of vindication of the American school of medicine are loudly called for at the present time by the students of anæsthetics.

The lamented illness and death of Professor Simpson, in May, at Edinburgh, has brought up again (as it was sure to do) the claims of America to the discovery of "etherization" or practical anæsthetics: one would say *practical* anæsthetics, with the subsequent improvements in surgery consequent on surgical operations without pain; *e. g.* ovariotomy, excision of joints, reduction of old dislocations, cure of traumatic tetanus, puerperal convulsions, cure of strangulated hernia, &c. The real honor of the application of anæsthetics belongs of course to America. The January number of the *Medical Review* for 1847 had a remarkable postscript signed by Sir John Forbes, announcing the discovery as having taken place in the previous November; but when one finds, of late, in England, in the newspapers, nearly all the facts misrepresented, it is only fair to the cause of scientific truth that some protest be entered, though one does so with a feeling of unpleasantness towards public, literary guides, very alien to one's natural wish.

A somewhat unfair advantage has been taken of America, of late, in England, though the movement has not been shared in by men of larger and more generous minds. The names of Morton and Wells have been carefully ignored, as to anæsthetics, and in the majority of public journals all the glory, or the entire credit, of surgical operations without pain, has been given to Professor Simpson. Six or ten clannish Scotchmen, aided by the Lord Provost of Edinburgh—the well known proprietor of *Chambers's Journal*, who can alone, if so willing, wield the entire press of England and Scotland—have written the name of Simpson up to a Robert Burns empyrean of their own, sedulously taking care, especially in medical journals, not to hear the opposite side of the question.

One admires the remarks of your journal that beneath the funeral pall which covers the bier of poor Simpson we must hide all differences, all earthly competition. But will the uncompromising logic of facts agree with the pronouncement of Clymer, Otis, and others, of America, that ether is inferior to chloroform, and all the glory is due to the late Professor Simpson? One would be inclined to go a long way with the writer "*Innominatus*" in your Journal, as to the absolute virtue of ether as superior to chloroform. It is, however, an eminently clinical subject, and not one to be settled by the abstract ideas of a young chemist like Dr. Murray, who writes in the *British Medical Journal*, and never permits chemical fancies or ideas to be corrected by absolute hospital facts. Cases of death from ether have been denied in the Boston Society Report.

We must, nowever, recall the cases quoted by Sabarth, and also the general admission that death *may* occur from ether, though slowly and by intoxication; not like chloroform, quick as a flash of lightning, without signs of intoxication; but it is nearly impossible that this or any other problem in anæsthetics can now be worked out in English medical journals.

A too credulous public, controlled, or in the hands of those who can only see any true virtue in Simpson's discoveries, or voltaic narcotism, or coagulation of the blood by escape of ammonia, methy-ethylic ether, &c., or in the press of M. Emely, where the facts as to Morton and Simpson are reversed, ignores America as a cardinal point of public probity. The death of poor Lady Simpson last month, our Harveian oration in June, friendly Scotch meetings at the Duke of Sutherland's to get up a gorgeous testimonial to Simpson, all tend to keep up a painful feeling of unnecessary excitement against American claims. But surely all this will not satisfy or prevent the relentless finger of history from claiming for the stars and stripes some of the credit due to Morton; we make no sign at the death of poor Syme or the Earl of Clarendon, but popular innocence must be encouraged that as to anæsthetics America can have no claim.

It is not my purpose to enter into the history of anæsthetics: this has been done by Snow, by Lallemand, Perin and Duroy, Sabarth and others, and recently set abroad in a way of his own, taken out of these books, by an ever glowing rhapsodist in the *Lancet* and *Medical Times*, and in London newspapers: the public and professional mind has been unhappily mystified "up to the top of its bent," until, at last, it is a part of English history—like Runymeade or Wat Tyler—that to Simpson and Scotland all the glory of anæsthetics is due, let America vaunt as she pleases. "There was a heart in Simpson that was impressed with the great evil of pain," says our rhapsodist in the *Lancet*,[*] "and gave him a pleasure in relieving it, and it would be difficult to decide to what extent the credit of his discovery of the great anæsthetic (chloroform) was due to the energy of his mere humanity." And again, "the discovery at once wafted him to a height of fame parallel, if not superior, to that of Harvey, of Jenner, of Hunter or of Bell. Those indeed who questioned his right to the honor of discoverer only betrayed their incapacity to take the soundings of his intellect; few men have possessed, in equal measure with himself, the combined strength and nimbleness of faculty by which alone Proteus is to be fettered. Few could so wrestle with the fleeting spirit of science, and refuse to let it go till, like Jacob of old with the angel, he had wrung from it a blessing." "Since the days of Sir Walter Scott, we doubt if there was a Scotchman who commanded so much hearty and loyal affection from all grades of the people. His house was a sort of metropolitan Abbotsford, the daily luncheons, &c." And then he is likened to Prospero, and Ariel and Puck, now on account of his power over the living elements, then in "diplomacy and intrigue of the present." The *Times* newspaper added the rather astounding statement, that all this was short of the truth, for Simpson had used, to their positive knowledge, chloroform in midwifery in 1844, long before some obscure Americans had revived an idea of Sir Humphry Davy as to ether in 1847, or 1846.

The well known writer of most of these glowing adumbrations, showed at one time that in tooth drawing, if by a severer shock of electricity through the dental nerves, the mind was taken off from the actual pain, the actual pain as a logical sequence disappeared, the attention being so taken off:—in other words, you were relieving the latter pain:—and those who questioned the right of this to be considered as a discovery of great value only betrayed their incapacity to take the soundings of electric science, and this new phase of it, termed voltaic narcotism; this wonderful Proteus, of combined strength and nimbleness, only thus to be fettered! These authorities, who thus see all the originality as to anæsthetics in the simple fact that Flourens had been using chloroform for a twelvemonth before Simpson, and that this fact was known to Simpson, and was directly suggested and recommended in one Protean form or another to him by Dr. Formby, Mr. Waldie, or Jacob Bell—these authorities, who must know that Simpson was not at all the originator of the use of chloroform, trust yet to the great national spirit of Scotland, and rest satisfied with the after-dinner self-adulation speeches of Edinburgh aldermen to assure the world that Simpson alone, like Jacob of old wrestling with the angel, had himself grasped the great secret from nature, wafting him to a height of fame superior to that of Harvey, Jenner, Hunter, &c. Nay, moreover, they state that nitrous oxide, the wild dream of some Americans, was like other American pretensions, vulgar and common-place, and not to be tolerated for a moment when compared to voltaic narcotism, or methyl-ethylic ether! Yet all these general and rather dogmatic formulæ of the chemical laboratory, as it strikes practical men, require the correcting influences of hospital experience. But the English medical journals referred to—as, in the American war or rebellion, and fitting out of Alabama ships, &c., they defended one side—now sanction all this reversal of history, as Simpson's great name is opportunely on the "crest of the wave."

But it is really not a question of popularity at all, or struggle with angels in a Tam O'Shanter empyrean, Proteus or Puck, of after-dinner speeches, carefully preserved in the *Lancet*, or other weekly prints, that climb the "crest of the wave," one day with Alabama invasions, the next with voltaic narcotism, or Simpson equal to Harvey.

It need scarcely be said, that previous to 1846, when Morton and Jackson introduced the administration of ether vapor, to destroy the pain in surgical operations, the scenes for hundreds of years in operating theatres were, or had been, of the most heart-rending, hideous kind; excisions of the knee, for instance, which analogy led surgeons to approve, were given up on account of the prolonged agony. The chief Dublin surgeon of that day relates that he tried the operation; but having to get four men to hold the poor writhing, shrieking child, in her horrible torture, and prolonged sawing and carving and cutting alive, he gave up the operation in despair; and so of ovariotomy, it was amongst the operations that, even after the discovery of ether inhalation, was interdicted at our Paddington Hospital, and an action for homicide was threatened against the obstetric surgeon, if he dared to undertake it and the patient should have died.

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[*] The Lancet. May 14, 1870.

The Greeks say Alexander the Great marched triumphant over the world back to—chaos; so is it in some degree of those few writers, now chiefly the conquering advocates of voltaic narcotism, ether spray, methyl-ethylic ether, &c., who are exploring or marching over the great field of anæsthetics, and reverting to this region of surgical chaos; not in order to recognize or thank Morton and Jackson, but to place Simpson at this "height of fame parallel, if not superior to that of Harvey, Jenner," &c. The Americans, we are told, "are the most childishly sensitive" in making any claim for Morton, and we are treated to a disquisition in the *Lancet* on the anodyne draughts of the ancient Greeks, the supposed virtue of mandragora and to the narcotic or anæsthetic wonders "shown by ourselves in 1854, possessed by the lycoperdon or puff ball" for stupefying bees when exposed to its fumes, though the recognized Hand Book on Bees in England, says the fumes of burning rags, or fustian, is a better narcotic still (containing carbonic oxide).

All ethical propriety or honesty seems lost at present. Morton's name is carefully ignored, the story of the patent in Congress misrepresented and magnified. All sections, the most opposite in the profession, the spinal ice-bag enthusiasts in England, the admirers of the lancet in typhus, and the dogma of *stare super vias antiquas* in hebdomadal literature, the journals of the cheap wine trade and secret chloroform and treacle nostrums which pay hundreds of pounds for advertising in legitimate journals, all join Dr. Richardson in these rhapsodies; all agree in denouncing the Americans for claiming any virtue in "Etherization" and Boston in particular; nay, what is more, will never permit a correction of manifest errors, only in their own way, or in a half way, when the error has had its day; and just as Jenner was denied all honor for vaccination at our London College of Physicians, and Sydenham was denied its fellowship while dukes and lay lords were made fellows, so the name of Morton is derided; this may do for Carmichael Essay adjudications in Dublin, but it scarcely consorts with a judicial inquiry as to what America has really done.

TEMPORARY BLINDNESS, FOLLOWING AN ATTACK OF INTERMITTENT FEVER.

Translated by D. F. Lincoln, M.D., Boston.

The patient was a robust young man, aged 19. When first seen by the physician, he was lying in violent clonic convulsions, entirely insensible; the body was sweating moderately, the pulse was 110, the pupils reacted slightly. He had been suffering during the previous fortnight with intermittens tertiana postponea; the attacks, however, had never reached the intensity of the one in question. The bystanders thought the man was dying. The symptoms being apparently referable to the "chill," which had made its regular appearance on that day, and had already passed into the sweating stage, a favorable prognosis was given. Three hours later, the patient was found in the full possession of consciousness, bathed in perspiration, and weeping bitterly at the loss of his eyesight. He said he had seen nothing since coming to his senses. The pupil reacted distinctly to light; but the power of vision was reduced to a feeble perception of the light of a candle. Ophthalmoscopic examination gave a completely negative result; no pathological changes being visible either in the fundus or in the media. In view of the origin of this condition, it was thought best to administer a strong dose of quinia. The patient remained five hours longer in the same condition, then fell asleep (about 6 A.M.), and when he awoke the power of vision was completely restored. How much the quinia had to do with the favorable result, must remain uncertain. Pigmentary embolism of the arteria centralis retinæ, with consequent transitory disturbance of nutrition, is suggested as a possible cause. (Reported by Dr. Dutzmann, in the Wiener Med. Presse, June 26.)

CASE OF MONSTROSITY WITH TRANSPOSITION OF THORACIC AND ABDOMINAL ORGANS.

By W. H. Triplett, M.D., Woodstock, Va.

On May 10, 1870, was called to a mulatto infant, two days old, for a large tumor on the back of the head, which the mother wished removed by surgical operation.

The child was not well grown; not exceeding five lbs. in weight. Tumor was quite as large as the child's head, very tense, and marked with a deep seam nearly longitudinally, and in appearance resembling very strikingly an immense "waterfall."

Careful manipulation made out a firm unyielding line of bone, the margin of a large opening in the skull occupying the region of the "posterior fontanel." It evidently contained fluid and quite probably brain substance—a hydro-encephalocele.

The eyes looked a little popped, but it took the bottle very well, and there was no paralysis or convulsive movements. The child survived thirty days and died.

Some days before death the tumor ulcerated and discharged quite a quantity of water, still retaining considerable bulk made up of brain-substance and its envelopes.

On June 8 it died, and I secured the body. It had not grown any since birth.

On opening up the sac, it contained a large amount of brain, perhaps nearly one half of the cerebrum, and some water. When the thoracic and abdominal cavities were opened, the order of the viscera was exactly reversed; there was a complete transposition of the organs; those that ought to have been found on the right side were discovered to be on the left side, and *vice versa*. The liver was swung to the left side of the diaphragm and buried in the left hypochondrium; the spleen was on the right side. The pyloric end of the stomach, with the duodenum, pancreas and jejunum were turned completely about to keep up relationship with the liver.

The colon was reversed, the cæcum occupying the left iliac fossa, the sigmoid flexure passing over the right.

The right spermatic vein emptied into the right renal vein, and the left spermatic into the inferior cava.

There seemed to be a complete transposition of the abdominal organs. When the chest was opened the same state of things was noticed.

The heart was on the right of the sternum, the pericardium being extensively attached to the right diaphragm, as it is to the left diaphragm when the heart is in normal position—the greater part of the base being on the right of the central tendon. The right lung had two lobes instead of three, the left had three instead of two lobes.

Reports of Medical Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

CHARLES D. HOMANS, M.D., SECRETARY.

May 9th.—*Stricture of the Rectum.*—Dr. **Fifield** said that during a recent visit to New York, his attention had been drawn, by some remarks of Prof. Charles Budd, to the subject of stricture of the rectum. It was of the annular stricture, and not of that produced by malignant disease, that his remarks would be made.

Such stricture is to be found in all conditions of life, among rich and poor and at all ages. At Charity Hospital, Blackwell's Island, cases could always be found as well as at other hospitals of the city. Attention being called to the condition of the rectum by the complaint of obstinate constipation, a firm ring of cartilaginous hardness is found, craggy with elevations and depressions, when viewed by speculum, white and bleeding easily. This is evidently a deposit of a new material possessing a low vitality with a constant tendency to destruction by ulceration, and this in its turn succeeded, it may be believed, by a cicatricial tissue.

Following the affection of the rectum comes the destruction of its walls, and the occurrence of recto-vaginal fistula which is irremediable by any known means. To the constipation succeeds a symptom which might often lead an inattentive observer to believe in the existence of dysentery, viz.: the occurrence of repeated discharges (from three to twelve a day) of pus mingled with mucus and blood, attended with some tenesmus. Attentive investigation of the history of the case will soon, however, set the practitioner right. With all the discharges the patient may have one or two solid feculant motions, in no ways different in color or consistency from those of health. These are often attended with severe pain.

The discharges of pus, for so an examination shows them to be, are peculiar in their occurrence. They come at somewhat regular periods, take place suddenly and no effort of the will is sufficient to resist them. The rectum has become a reservoir which will contain so much only, and then overflows.

Although the point has never been alluded to by any writer or discussed by any society, Dr. Fifield believed that the craggy annular ring tended after a time to disappear, leaving eminences which give to the touch the feeling of currants, and might be mistaken for internal piles. Broad ulcers are also found, which continue to pour forth pus and are intractable under any treatment. He had seen two such cases. A dispute has existed between two eminent writers as to whether this disease was or was not confined to the male or female sex. Dr. Budd has seen it only in females, and he is confirmed by Dr. Henry S. Hewitt, of New York, one of the surgeons at Charity Hospital.

Mr. Curling, in his work on Diseases of the Rectum, evidently alludes to this disease, although, as will be presently shown, he has not grasped its true cause. Mr. Curling says, "There a peculiar form of stricture of the rectum not generally known, or fully understood. In cases of the disease the interior of the rectum is abundantly studded with small excrescences, arising from partial hypertrophies or irregular growths of the surface and folds of the mucous membrane. The sensation communicated to the finger, passed into the rectum, is remarkable, the surgeon feeling a number of rough irregular eminences, more or less hard, thickly lining the surface. The stricture is situated further from the orifice than in ordinary cases, usually at a distance of three inches. This disease is attended with a profuse discharge from the rectum of pus mixed with slimy matter and blood. There is not only painful tenesmus before a feculent evacuation, but a frequent and urgent desire to void the pus and mucus which collects in the bowel. This was so frequent and so pressing in the case of a gentleman under my care, that he was unable to go into society, ride in a public conveyance or travel by rail."

Dr. Fifield stated that a person under his own observation was obliged to wear napkins to receive the discharge, so completely was it beyond control. Mr. Curling goes on to remark that "this form of stricture occurs chiefly in women;" he has met with only one case in a male. The disease has been noticed by Sir Benjamin Brodie, who also observed it in women, especially those who had borne children. (London Med. Gaz., vol. xvi.) An incomplete paper, giving a short account of this peculiar form of stricture of the rectum, by the late Mr. Collis, was published in the Dublin Quarterly, in Feb., 1854. In this paper there is a table of sixteen cases, and it is remarkable that thirteen of them were males. Mon. Gosselin, in a paper (Archives Générales de Médicine, Dec., 1854) gives an account of twelve cases, all females. In three, the parts were examined after death. He has shown that "an ulcerated state of the mucous membrane above the stricture is the chief source of the purulent discharge." Dr. Fifield said that the domain of syphilis was yet a very partially explored one, and seemed ever to stretch forward before us; that as lesions of the brain, heart, liver and lungs, had now become familiar to us as the result of syphilitic infection, so he believed we should yet be obliged to own it as the cause of lesions of other parts where its influence had hardly as yet been suspected. In regard to the form of stricture of the rectum which we had been considering, Prof. Budd has stated his belief that every such case is a manifestation of syphilitic infection. The same view is held by other surgeons connected with institutions to which persons so afflicted are prone to resort. This truth has been suspected for a long period, but not brought prominently forward into broad light, and the authority of Mr. Curling has been exerted to abolish the thought of connecting one with the other. Mr. Curling says that the tubercles, scirrhosities and internal condylomata of the rectum, described by Desault and Delpech, were nothing more than the eminences of which he himself has given a description. Desault believed them due to a syphilitic origin. This, says Mr. Curling, was also the belief of Gosselin, but *he* (Mr. C.) sees *no* evidence in the cases seen by himself, or in those of Mr. Gosselin, to connect them with syphilis either local or constitutional. M. Gosselin supposes an inflammation, resulting from a primary sore, spreads to the rectum and gives rise to this peculiar affection. This explanation, Mr. Curling says, few will regard with satisfaction. Dr. Fifield thinks it may, *now*, from the testimony of many competent observers, be considered as a result of constitutional syphilis. Treatment of this affection, except so far as constitutional means can affect the whole system, may be considered useless. In regard to the local effects of the disease, such as recto-vaginal fistula, they have as yet proved incurable. Such at least is the testimony of those who have had the best opportunities for observation. In the early stage of the stricture, the dilatation by the gentle use of bougies may effect good results, but it must be persisted in for a very long time.

What is true of stricture of the rectum will, Dr. Fifield thought, prove true of stricture in other parts. At a recent meeting of the Royal Medico-Chirurgical Society the question was asked, "How far is the resilient stricture of the urethra connected with constitutional syphilis?" showing that the thought has already arisen that all strictures of the urethra are not to be referred to as the effect of repeated gonorrhœal inflammations or to injuries inflicted on the canal. Strictures of the œsophagus when non-malignant are probably the effect of syphilis. A remarkable case of this may be found in the last number of the American Journal of Medical Sciences. In this case the operation of gastrotomy was performed with a fatal result.

JUNE 13th.—*Cuneiform, Spiroidal, or V-Shaped Fracture of the Tibia.*

Dr. Hodges exhibited the specimen, and said he believed the attention of the Society had never been called to this fracture. He did not think one had ever been shown, or that either their Museum, or that of the Medical College, contained an example of it. Besides those fractures to which the lower part of the tibia, in common with the rest of the shaft, is liable, it appears to be frequently the seat of a solution of continuity, first described by Gosselin in 1855, interesting on account of its regularity, the peculiar line of the fracture, and the gravity of its prognosis. It occurs usually at about the junction of the middle and lower third. Both tibia and fibula are broken, but the fracture of the fibula is of secondary importance. The break in the tibia is neither transverse, oblique, or dentated, but spiral, both upper and lower fragment presenting the form of a V, the apex of which points downward. From the apex of the V in the lower fragment a crack runs downward, either spirally or obliquely, but always in the same general direction, and winds around the shaft until it reaches the tibio-tarsal articulation, into which it penetrates. Although the wedge-like form of the break, and its action in any movement of torsion, would seem to explain this longitudinal splitting, the mechanism of the injury is still a matter in dispute.

The signs of a V fracture are not distinguishable from those of other fractures of the lower third of the tibia, and they are rarely diagnosticated; but a great projection of the upper fragment, with tenderness and swelling at the ankle, should put the surgeon on his guard as to prognosis. The pointed prominences of the shaft often penetrate and break up the spongy tissue or medullary cavity of the bone, and the complications which ensue are sometimes exceedingly severe. Inflammation of the medullary canal, suppuration of the ankle joint, and pyæmia not unfrequently follow. It was at first asserted that this fracture always rendered amputation necessary, whether it was or was not accompanied by a wound of the soft parts. Recognizing in either case the same lesion, Gosselin remarked that "he was almost disposed to say that the complication of a wound was a piece of good fortune, since it spurred the hand of the surgeon, and made amputation, which alone could save the patient's life, obligatory." Experience, however, has not justified this desponding opinion. The fracture is generally recovered from, but a long time is required for its consolidation, and a stiff ankle is pretty sure to supervene.

The patient from whom the specimen shown was obtained, illustrates in the history of her case most of the points which have been alluded to. She was an intemperate Irish woman, æt. 37. The accident occurred February 13, 1870, and was caused by getting her foot into a hole in the frozen ground. While her foot was in this position a movement of torsion was made, and the leg was broken. She would have fallen to the ground had not some friends caught her. She was carried a distance of half a mile to her home. On examination the tibia was found broken at its lower third, and the fibula near the ankle-joint. There was no external wound and but little displacement. Within twenty-four hours great swelling ensued, followed by abscesses and gangrene, superficial in parts, but causing the loss of the toes, the protrusion of the broken fibula at the ankle, and of the tibia in the shin. The constitutional symptoms were severe, and for a time the patient's life was in great danger. The judicious treatment of Dr. Whittemore, of Marblehead, under whose care she was, carried her through the stage of active inflammation, and on May 9th she was removed to the Massachusetts General Hospital for amputation. This was performed, thirteen weeks after the accident, through the middle of the leg. A good recovery followed.

The exposed portions of the bone exhibit the progress of necrosis, but the V-shaped fracture and the spiroidal fissures, especially that into the ankle joint, are clearly traceable in the parts preserved. The bones forming the ankle joint reveal the severity of the inflammation by their necrosed condition. The attempt at repair masks to some extent the lines of fracture, but the identity of these with those shown in the figures given by Richard is still apparent, and confirms the justice of his remark as to the great similarity which different specimens of this injury present: "*qui a vu l'un a vu les autres.*"

Medical and Surgical Journal.

BOSTON: THURSDAY, AUGUST 18, 1870.

A WARNING OF DANGER.

WE are glad, while we reproduce the letter of Dr. Derby to the City Government of Boston, to call the attention of the profession to the great sanitary grievances which even now exist in various parts of our city; hoping that by the influence which our medical brethren may exert, the City Council will be induced to take the necessary steps for abating the nuisances complained of, or forced to bear the responsibility themselves.

COMMONWEALTH OF MASSACHUSETTS.
STATE BOARD OF HEALTH,
BOSTON, July 7, 1870.

To the Mayor and Alderman, Health Commissioners of the City of Boston:—

The State Board of Health desire respectfully to call the attention of the health authorities of the city of Boston to the fact that the owners and keepers of tenement and lodging houses are not complying with the provisions of an act of the legislature of 1868, and chapter 281 of the general statutes of Massachusetts. A large proportion of the unfortunate poor are crowded into buildings whose construction sets at defiance the laws of health, whose yards and privies are filthy in the extreme, and whose general condition is such as to render them liable at any time to become centres from which pestilence may extend in every direction.

Very respectfully your ob't servant,
GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

The Board of Consulting Physicians spoke the sentiment of every medical man in our community in their communication* to the City Government, when they called their attention to the want of sanitary care among us at the present day. While acting as an inspector at the time of the threatened invasion of cholera four years ago, we took occasion to make a report of some nuisances in our tenement houses and in certain overcrowded sections of our city. It is briefly and thoroughly expressed by the Consulting Physicians in one paragraph of their communication. They say:—"There are, in all parts of Boston, filthy back-yards, alleys and passage-ways, broken-down and overflowing vaults, and, in the older portions, disused wells and cisterns, which are receptacles for dirt. All these nuisances should be reformed."

Within a few days, we have visited some of the same quarters, with a view to ascertaining their present condition. It is almost identically the same as we found it to be in 1866, being only changed by the accumulation of filth which four years have added to the stock.

"Our tenement-houses are in a condition discreditable to a civilized community. It is only necessary to visit Friend Street Court, or the Crystal Palace, in Lincoln Street, for any citizen to see under what desperate circumstances the occupants of these, and hundreds of other similar houses, are compelled to live. Their rents are enormous, and their condition calls for the relief which the legislature of 1868 intended to afford them through the Tenement-House Law."

The condition of some of our streets is far from what it should be. We heartily concur in the opinions expressed by the Consulting Physicians on this subject. We look in vain for the cleanly condition which the daily flushing of the gutters and sewers of Paris gives to that city through the summer months, and for the excellent condition of most of the large cities of Europe. It is with such cities our comparison should be made, and not with the less cleanly portions of our own country.

We have, within a very short time, had our attention called by patients and others to vaults and privies, whose condition is such as to demand immediate and active interference on the part of our authorities. Between two of our respectable streets, in the south part of the city, is a range of open vaults, imperfectly protected, and, in some cases, in an almost ruinous condition, which for the past two months have been in such a state as to necessitate the closing of the windows of whole ranges of houses for hours together. In the rear of a building, recently occupied by one of our public institutions, are vaults which have been the cause of great inconvenience to the inmates for the whole summer, filling the house with a stench suggestive of anything but the pure air which such an institution demands. These are but samples of cases which are every day brought to the attention of our practising physicians.

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* City Document, No. 43, 1870.

It may seem a matter of small moment, but it has long been very apparent to us that the manner in which the refuse of the city is gathered and removed is a crying nuisance. The decomposing masses in our city carts, standing as they do exposed to the rays of the sun for considerable periods, give forth volatile acids which are certainly very offensive and must have a deleterious influence on the neighborhoods. A few days ago we noticed this very disagreeable stench, and, on investigating the matter, found that the offending cart was *three squares* away, and was thus poisoning the atmosphere over a very large space.

We have mentioned the responsibility which the City Government bears in this matter; we certainly feel that it is one of no light moment. We are told by the physicians of the Dispensary, whose walks carry them among the poorer classes, that, this year, they see a large number of intestinal diseases among children, and we know ourselves that in the various classes of patients there is a great tendency to such disturbances of the alimentary canal. The great heat of the present season, the frequent showers of June, the drought of July and August, and the large amount of immature fruit in our markets, have had their influence in bringing about this result; but it is, especially, among our poorer citizens that we see intestinal troubles in their severest forms. Can we ascribe the predominance of this class in our mortuary records *alone* to the condition of the atmosphere, to the fruit, or even to the known carelessness of these people in guarding themselves and their children? Is is not rather to be charged to their crowded, incommodious, and, too often, filthy dwellings—and are we not responsible, to a certain degree, that such abominations are allowed in our very midst, as some of us see every day in our professional circuits? It is certainly a significant fact that, for the past four weeks, of 763 deaths in the city of Boston, 478 of them were of children below 5 years of age; and that 338 of the whole number died of intestinal diseases. It is not a light responsibility to bear, when it is considered that in this manner we lose so large a number of our citizens of the future, and that a certain proportion of these die from a want of sanitary precautions.

We have thus touched on a few of the evils which may be brought on a community by the thoughtlessness of a city government; thoughtless, it may be, when the safety of our citizens is not at stake, but it should be characterized by a much stronger word, when interests of a momentous character are involved. We trust our brethren will exert the influence which they possess on our City Fathers for the increase of sanitary care.

The following are the concluding paragraphs of the communication from which we have already quoted, and which are in accordance with our own views:—

"These reforms require an outlay of money, but we believe they would prove to be good investments, and that a true economy demands them.

"The money value of human life to a community is real. A destructive epidemic is expensive. Moreover, a clean and unquestionably healthy city, such as Boston might be made, would have attractions for permanent residents and transient visitors which could not fail to favorably affect its commercial interests.

"It might also well be an object of pride with every citizen to furnish in Boston an example of public cleanliness and public health which other American cities would imitate."

Congestion following the Ligature of Arteries. By Dr. Brown-Sequard.—In 1868, M. Prompt announced to the Society of Biology that the kidney became congested when the renal artery had been tied. M. A. Moreau also stated that he had obtained a similar result in the spleen and the intestines after the ligature of the splenic and mesenteric arteries.[*] More recently, M. Teillais, in an interesting thesis,[†] reports that he ligated the vena porta in a dog and found, two hours and a half after, that the liver was very much congested.

I have made a variety of experiments, for some time past, on the influence exerted by the ligature of arteries of the limbs and the viscera on the quantity of blood contained in the different parts of the body. In these experiments and in others which I have recently made on dogs and rabbits, the result has been that, whenever the arterial sources of circulation have been entirely or almost entirely cut off, in the kidney, the spleen and a portion of the intestine, these parts have been congested to a marked degree. I have obtained a similar result in the liver, after the ligature of the vena porta.

These facts are analogous to many others, well known in themselves; for instance, the return of the blood by the lower portion of an artery which has been ligated (carotid, aorta, femoral) and opened beyond the ligature (that is, from the end separated from the heart); and the elevation of temperature which takes place, at times, after the application of a ligature to the principal artery of a limb. Some time since I gave an explanation for these facts, which has now been generally accepted.[‡] Knowing that the arteries are supplied with numberless vaso-motor nervous filaments, I expressed the opinion that the ligature of an artery paralyzes the nerves which accompany it and produces, consequently, a paralysis of the ramifications of this vessel; whence it follows that the blood of the collateral vessels, finding a way open in the parts supplied by the ligated artery, flows in that direction, causing congestion and an elevation of temperature. It is necessary to explain in another way the case of the ligature of the renal or splenic artery. I have been able to experiment on the kidney and the spleen, in such a way as to prevent entirely the flow of arterial blood. In the kidney, for example, after having separated the cellular tissue, I isolated the ureter and the renal vein, and then ligated the remaining vessels entering the hilum. In these experiments, the blood could only reach or leave the kidney by the renal vein. After the ligation, the kidney increased in size, and when I had cut the renal artery between the ligature and the organ, there was a hæmorrhage which lasted eight or ten minutes while I allowed the animal to live. There is, then, no doubt that a reflux of venous blood takes place—at least in the abdominal viscera—whenever the principal artery has been ligated, or, as in the liver, whenever the principal afferent vessel has been tied (vena porta). It is easy to see how this reflux takes place; the blood in the entire body is submitted to a considerable pressure during life, a pressure which the elasticity and contractility of the distended vessels constantly tends to diminish. If a paralysis of the vaso-motor nerves exists in an organ, for instance the kidney, and if the *vis a tergo* of the blood has ceased on account of the interruption of the flow of blood in the arteries, it is very clear that, finding less resistance in the vessels of this organ, the blood flows there and causes congestion.

The same fact is not observed in cases where other vessels furnish blood to the organ whose artery has been tied. Here the venous reflux does not account for the congestion; but although the circulation continues in the ordinary sense, that is, from the arteries to the veins, it happens that the quantity of blood passing, in a given time, through the part where the paralysis of the vaso-motor nerves exists, is less, at the time the vessels are larger and contain consequently more blood, and this, moreover, at the time when it is charged with carbonic acid. This is, without doubt, one of the causes of convulsions and of other nervous troubles which have been observed immediately or soon after the ligature of one of the primary carotids in man.[*]

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[*] Comptes Rendus de la Société de Biologie, 1868, pp. 223, 224.

[†] De l'Ulcere Chronique Simple du Duodénum. Thèse de Paris, 1869.

[‡] Broca; Des Anévrysmes et de leur Traitement. Paris, 1856, p. 565.

[*] In connection with the disturbance of the brain thus mentioned by M. Brown-Sequard in the Archives de Physiol., it is interesting to note the remarks of Dr. Lidell, in the Surgical Memoirs of the War of the Rebellion, when speaking of injuries to bloodvessels.—

"Concerning the softening of the substance of the

We are favored this week with a communication from Dr. Kidd, of London, Eng., which presents his views on a subject of interest to our readers. Dr. Kidd is best known in this country as the Editor of the "Mirror of the Lancet," the author of a work on anæsthetics, &c. &c.

From the last report of Dr. Edwin M. Snow, the Superintendent of Health and City Registrar of Providence, R. I., we make the following extract:—

"The number of deaths in Providence, in July, was considerably larger than was expected, and shows, unmistakably, the effects of the great and continued heat we experienced during the greater portion of the month. The increase of mortality in July, over the corresponding month of last year, was almost wholly in the deaths from cholera infantum, a disease of quite young children. There were 22 more deaths last month than in July, 1869, of which increase the deaths from cholera infantum were 20. Of the 42 decedents in July from cholera infantum, 14 were of American and 28 of foreign parentage; of the 79 decedents under 5 years of age, 31 were of American and 48 of foreign parentage. * * * *

"The record of mortality in July confirms the opinion we gave a year since that the use of fruit and vegetables has no influence upon the increase of mortality among children during the summer season. Of the 49 decedents from summer complaints in July, all but three were under 2 years of age, and only one was between the ages of 2 and 12. There can be no doubt, judging both from common sense and from statistics, that the use of fruit and vegetables, in their season, must be conducive to health.

"From information received from various quarters, it would seem that the extreme drought of the month has given rise to considerable dysentery of a severe type in country places. Though we have had a considerable increase of mortality, the country portions of New England, including some places noted for their salubrity, and even some of our summer shore resorts, are much more unhealthy at the present time than the city of Providence."

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brain which so frequently follows ligation of the common carotid artery, we ought to say that it bears a strong resemblance in its origin and nature, at least in many cases, to consecutive gangrene occurring in the extremities; and the author is of the opinion that it would be useful in a practical point of view to call it *consecutive gangrene of the brain.*"

Prof. Stricker on the Question of Inflammation.—This question, so important in relation to pathology and medicine in general, occupies at this moment the attention of two of the most rising German physiologists—namely, Prof. Cohnheim, of Kiel, and Prof. Stricker, of Vienna. They stand in diametrical opposition to each other, and the pivot upon which the question rotates involves a question of no less importance than that of "humoral or cellular pathology." Cohnheim is the champion of the first, and consequently rejects the teachings of Rokitansky, Virchow, Billroth, &c., on this point. Stricker, on the contrary, advocates the latter, and endeavors to reinstate the authority of those pathologists. We subjoin, therefore, an abstract of an address relating to this subject, recently delivered by Prof. Stricker before the Medical Society of Vienna.

I shall shortly supplement, says he, my views expressed last year on the inflammatory process by the results of further researches, but I have special reasons for making in the meanwhile the following statements:—

I have again experimentally and carefully examined the inflamed cornea of a frog, and the results of this examination enable me to declare that the inflammatory alterations of the corpuscles of the cornea may, as I formerly stated, be ranged among the best demonstrated facts with respect to cellular pathology.

Pathologists will at once perceive the scope of such a statement. I must, nevertheless, express more precisely the principles I have in view. According to the earlier teachings of cellular pathology, the following propositions may be laid down:—

The life of an organ is the expression of the form-elements of which it is composed.

Disease designates merely a phenomenal mode of life.

When we say an organ is diseased, we indicate thereby that its vital processes are abnormal.

With reference to the first proposition, we indicate also thereby that the life of the form-elements equally deviates from the normal condition.

These fundamental conditions have been contradicted by Cohnheim as regards the cornea.

If, argues Cohnheim, those cells of the cornea not directly affected by irritation, are, as living organisms, not impelled to an abnormal life, then the above principles cannot stand; then we must differently define that disease of the cornea which physicians call inflammation'; then this disease is no longer the expression of another phenomenal mode of life.

If keratitis, under certain circumstances, signifies only a cornea clouded by foreign immigrants; if after the removal of the intruders the previous conditions are reinstated in their full integrity; then the principles of cellular pathology are no longer applicable.

If, further, as has been done, the dogma of Cohnheim is generalized, then the principles of cellular pathology are generally no longer applicable.

I have made a stand against such conceptions by showing that the cells of an inflamed tissue exhibit an altered mode of life, that they return to an embryonic condition, that their nuclei increase, grow, become amœboid and multiply. My late researches fully confirm these statements; I cannot in this place enter at length into these researches. I will nevertheless indicate a means by the aid of which professional men who, perhaps, may not be practised experimentalists, may by the application of the microscope convince themselves, at all events, of the most important point—namely, that in intensely diseased spots of the cornea mere traces are found of the normal corpuscles, and that smaller more nucleated elements have supplanted them.

Cut out the cornea of a healthy frog, bathe it for about ten minutes in a half per cent. solution of chloride of gold, place it in acidulated water, remove, after a few minutes, by gentle shaving, the anterior epithelium; replace the cornea in the acidulated water, and examine the preparation after a day or two, and you will convince yourself of the normal arrangement of the corneal corpuscles in this animal.

Immediately after cutting out one cornea, pass a needle with a strong double hemp-thread through the centrum corneæ of the other eye and its sclerotica, knot the thread, and cut it short. After two or three days, cut out this cornea also, and treat it as before. The anterior epithelium is here more easily detached by pincers as a whole lamina than in the healthy cornea. It is equally easy to detach the membrane of Descemet. The rest of the preparation—namely, the substantia propria—is then in glycerine, during the first few days at least, so transparent that no even moderately practised microscopist can find any difficulty by means of rather high powers (No. 10 Hartnack) in examining it in all its depths. Should this method as regards the depth dimensions not prove sufficiently satisfactory to any one, let him tear the propria into lamellæ, and examine them separately. Let him first with a low power search out the spots in which the form-elements in their strata are most thickly arranged. I must leave it to the judgment of the professional inquirer to draw from the examination of these spots such inferences as may be generally deduced.

Should it, in spite of these spots, be asserted that the old corneal corpuscles were covered, and could not be seen, then I must—apart from the circumstance that such an objection would not be admitted by a practised microscopist—advert to the fact that it was just the discovery of old corneal corpuscles amidst the thickest crowd of pus corpuscles which first impelled Cohnheim not to regard the former as the sources of suppuration. If, now, the old corpuscles cannot be detected in certain spots, then the "impelling momentum" vanishes.

As I here address a large public, I must abstain from entering upon the method of research which has enabled me to prove the cell-division, and also that the corneal corpuscles become amœboid. Such methods will always remain the property of a very limited circle of inquirers.

So long, therefore, as these questions are contradicted, I can do nothing but wait until competent and unprejudiced inquirers take up this subject. But the illustrations, which are now ready, and to which I again refer, are accessible to a larger circle, and I fully expect that they will confirm my statements.

The results of further researches will appear in another place. This much I may say, that the same principle, the growth and the increase of cells, show themselves in all inflamed organs. We cannot at present cultivate the pathology of the tissues without acknowledging this tenet.

In a former treatise I passed with one step beyond the doctrines of cellular pathology. I tried to demonstrate that disturbed circulation and exudation of fluid, shapeless, and shaped constituents of the blood, play an important part in the chain of inflammatory phenomena. In this direction I have also advanced, or, to speak more correctly, retrograded. I must at present range stasis among disturbances of the circulation, and I shall, in the proper place, produce the necessary proofs for this view.

As it was my intention to give this day only a summary, I must confine myself to a simple indication, from which, however, you may infer that I conjoin two historically separated theories long held to be incompatible. I accept again the symptoms of inflammation as taught by Rokitansky. I say that inflammation includes redness, stasis, and exudation, and I leave this old exposition at the point where the progress of the cellular theory has led us to securer roads. With exudation I combine the processes in the cell-elements, as taught, and we may assume will still be taught, by Virchow. I moreover see with pleasure that there obtains a disposition logically to conjoin one part of the teachings of Rokitansky with one part of those of Virchow. I see also with satisfaction that the theories of successive systems, which were successively adopted and successively rejected, are now looked upon as reconcilable.—*Lond. Med. Times and Gazette.*

LARGE SCROTAL HERNIA REDUCED, BUT STRANGULATED BY THE MESENTERY.—Mr. S. Messenger Bradley, in a letter to the Editor of the London *Medical Times and Gazette*, writes as follows :—

"The mistakes that a man makes are often more valuable experiences to him than his most brilliant successes, and for a long series of years stand out as clear and distinct landmarks, guarding him from any danger of repeating his error. Of course we must admit that it is 'bad for the coo' that comes in the way of the blundering train of thought, but it is none the less valuable experience for the driver. It is because there seems to me a lesson to be learned that I briefly record the following sad case of surgical mistake.

"On June 8th I was requested by a surgeon to see a case of strangulated hernia with him. On our arrival I found the patient, a powerful man of 40, suffering from a scrotal hernia as big as a small watermelon, and which, he stated, had been down for twelve hours. The man had been ruptured for fourteen years, but had always been able to reduce the hernia until the preceding night, when it came down very suddenly, while he was lifting a heavy weight, and was at once accompanied by a good deal of pain. He had vomited three or four times, but not stercoraceously. The tumor was not very tense, and there was slight impulse on coughing. The surgeon whom I accompanied commenced manipulating it, and from the gurgling and general feel of the tumor thought it could be returned. He consequently persevered with the taxis for about a quarter of an hour, using very moderate force, the tumor gradually diminishing the while, with much gurgling, and finally entirely disappeared. On coughing it did not return. The man said he felt slight pain, when he was questioned, but did not complain.

"The following morning I received a message from the surgeon, who wrote from the patient's house, requesting me to see the man at once. On my arrival he was dead. His wife told us that he had had a good day, but complained from time to time of slight pain. He had remained at home, and went early to bed. He awoke her at five, saying that he had terrible pain in his bowels, and remained tossing about till eight o'clock, when he sent for his doctor. At half-past eight he died. He had not vomited up to the last minute of life, when he threw up some semi-digested food.

"At a *post-mortem* examination we found that the hernia consisted of about two feet of small intestine, which had forced its way through a rent in the mesentery. The entire mass had been returned into the abdominal cavity, the constriction remaining unreduced. The strangled gut was black, but shiny, and the abdominal cavity contained about a pint of blood and serum. The gradual way in which this hernia was returned, accompanied as it was by the sound of gurgling, and the almost entire absence of symptoms of strangulation following the operation, render the case instructive, and point to the absolute necessity of carefully watching cases of hernia for some time after the taxis has apparently been successfully employed."

PATHOLOGY OF THE "BRIDGE CASES." By DR. LEWIS BAUER.—In building the Mississippi bridge, at St. Louis, many of the men working at the piers, or beneath them, have been stricken down with paraplegia and other disorders and symptoms, and four of them have died. Most of the patients, however, have recovered. Those who have died have exhibited evidence of severe inflammation of the brain and spinal cord, and their membranes.

By the manner of construction of the piers the men have been compelled to work in an air-chamber beneath the masonry as the whole was being sunk through the sand to the rock below, the air of which it was necessary to keep at just that pressure which exists in a diving-bell at that depth. The distance below the low water mark which this chamber is forced down, is about 100 feet, 80 of which is through sand ; so the workmen have, toward the close of the sinking of each pier, been compelled to labor under a pressure of about 60 pounds to the square inch of surface, or four times greater than normal to the human body.

Paraplegia is well-marked in every instance, from a slight paralysis of motor power to perfect paralysis of both motion and sensation. Numbness usually prevails; notwithstanding this, shooting pains from the spinal cord down are sometimes felt, but they, with all the hyperæsthesia, wholly cease in the paralyzed limbs.

The spine is always tender; pains in the muscles of the shoulders and chest continue for days after other symptoms disappear. The bladder loses its expulsive power early in the attack, and the urine in a day or two undergoes alkaline decomposition, and often contains blood. On supervention of paraplegia sensation becomes lost, and the patient may be scalded or burned without pain. Respiration is always disturbed. Previous to death the patient becomes apathetic, stupefied, and comatose. The pulse rarely exceeds 105 per minute. A *post-mortem* examination in one case showed nearly all the veins dilated and filled with dark tarry blood; great vascularity of the membranes of the cord and brain; a large amount of serum in the arachnoid space. The substance of the brain was changed, and that of the spinal cord, in places, was softened to a pulp, and nearly or quite all the glandular organs showed great vascularity and congestion.

Microscopic examinations showed that the softening of the brain is due, in part at least, to inflammatory processes.

The doctor sums up the pathology of these cases substantially as follows:—The great disparity between the pressure of the air within the chamber and the power of the gases and fluids within the body to withstand it, must be a main cause of the trouble. It is certain the equilibrium between these forces is very hard to effect in the short time required in passing into and out of the "chamber," and hence the system would be extremely liable to disaster. When the quantity of oxygen is proportionately increased in the dense atmosphere beneath the pier, there is hyperoxygenation of the blood, and proportionately increased waste of organic material going on while there. As long as this is going on little injury ensues, but on coming to a rarer atmosphere the power to eliminate this effete organic matter which has accumulated is so reduced that the system suffers from it at once.

I am unable to explain why the lower portion of the spinal cord should be the chief recipient of the poisonous effect."—*Chicago Medical Examiner.*

We observe a reaction from the somewhat intemperate enthusiasm of some of the foreign journals in respect to the late Sir James Y. Simpson. This might naturally be looked for. We subjoin the following, which is quoted by the Dublin Med. Press and Circular.

"Shortly after sulphuric ether had begun to be used for producing insensibility to pain during operations, it was, by way of amusement, tried one evening on a number of persons assembled at the house of Mr. Walker, homœopathic chemist, then residing in Liverpool, but now of Conduit street, London. It was found to be long in producing any marked effect, and in most cases was followed by sickness and vertigo. The operator was Mr. Waldie, the analytical chemist at the Liverpool Apothecaries' Company, and to him Mr. Walker remarked, that as chloric ether, when administered internally, was preferred to sulphuric ether in many cases, because of its not producing sickness and headache, no doubt it would prove a better anæsthetic; and that if found not to be strong enough, chloroform, from which it is made by dilution with alcohol, would certainly have the same properties, and should be tried. The experiment would have been made there and then, but the hour was late and the laboratory of the hall shut up, so that no chloroform could be obtained. It would have been useless to have tried elsewhere for it, as at that time it was used only for making chloric ether, and nearly all of that medicine used in Liverpool was made in the Apothecaries' Hall.

"About a month after this conversation Mr. Waldie had occasion to visit Edinburgh, and called on Professor Simpson, whom he found experimenting on various gases as a substitute for sulphuric ether, which he also had found very imperfect in its operation. Mr. Waldie then mentioned that he had thought of trying chloroform, and, as none could be found in Edinburgh, he promised to make some and forward it as soon as he returned to Liverpool. Professor Simpson, however, with his accustomed energy, at once set to work and had some made by his neighbors, the Messrs. Smith, chemists, and Mr. Waldie had scarcely reached home when he received a pamphlet giving the result of numerous successful trials made with it."

And also this, from the editorial:—

"The magistrates of Edinburgh, in their capacity as delegates to the court of curators, have with characteristic impetuosity and unreasoning zeal been endeavoring to anticipate the national memorial to Sir James Simpson; and, by placing the gown which had fallen from his shoulders upon those of his kinsman, have imagined they were conscientiously discharging a solemn duty in gratifying their own eccentric notions of what is due to the name of Simpson. This is, perhaps, the most charitable view to take of their recent act; and in this aspect it would be sufficiently ludicrous, were it not for the disastrous consequences with which their clumsy enthusiasm is fraught."

ON THE REPRODUCTION AND REUNION OF DIVIDED TENDONS. By M. DEMARQUAY.—From the researches of M. Demarquay it results that neither the blood, nor the plastic lymph, nor the blastema, which have been in succession invoked as elements of reparation, play the part that has been attributed to them.

From these researches the following conclusions have been derived:—

1. That the tendon is regenerated by the proliferation of the elements which are found on the internal surface of the sheath of the divided tendon, the two ends of which are retracted.

2. That the external portion of the sheath remains perfectly indifferent during this phenomenon, except it be that the vessels which it supports become more voluminous and increase in number.

3. That the proliferation which takes place on the internal surface of the sheath takes place at the expense of the cellular elements of this part, which at the end of the eighth or tenth day become confounded with the cellular elements springing from the extremity of the divided tendon.

4. That the regeneration of the tendon is so much the more rapid as the sheath of the divided tendon is more vascular; in fact, whilst the tendo Achillis is repaired by the twentieth or twenty-fifth day, the ligamentum patellæ requires a more considerable time.

5. That the phenomenon which constitutes the reproduction of tendon is, in all points, conformable to that which takes place in the reproduction of bone from periosteum, a phenomenon which has been well studied by MM. Flourens, Ollier, and Sédillot.—*Half-Yearly Abstract of the Medical Sciences.*

A MALFORMATION. By W. DICKEY, M.D.—Miss L. M. B., aged sixteen years, of pale complexion and frail constitution, was of consumptive parentage on her father's side; health only moderate from childhood. Eighteen months since her general health began to decline, with an increase of cough, with which she was always afflicted.

She never menstruated, but monthly phenomena such as pain in the back, with heavings in the hypogastric region, were evidences that the efforts of nature were at work to establish that function.

Her appetite was always pretty good, but the assimilative powers were poor. No diarrhœa since last August. Had night sweats occasionally for the past eighteen months. During the last few months of her life there was green purulent expectoration. But very little difficulty of breathing at any time. In September, 1868, I was requested by Dr. Prichet, her attending physician, to examine her lungs by auscultation and percussion. Configuration of chest: general appearance contracted; development of right side equal to that of the left.

Examination. Percussion elicited a dull sound over the entire left lung. Right side unusually resonant. Auscultation confirmed the physical sign of extensive tubercular deposits. At this time no special indications of tubercular softening. Subsequently, however, softening took place, as purulent expectoration was a constant symptom. Heart—its position unusual. In place of left side, strong cardiac impulses were heard on the right side; so strong that its impulses indicated a hypertrophy, or at least an aneurismal heart.

Autopsy, twelve hours after death. Present, Drs. Prichet, Cleaveland, and myself. On opening the thorax we found the left lung studded with tubercles, principally of the gray character; some, however, were yellow, and in the process of softening. Lung in left side somewhat larger than usual, but consisting of two lobes as ordinary. No lung in the right side, not even a segment at the bifurcation. Between the largest of pleura the space was clean and beautiful. No lung had ever existed. Heart in the mediastinal space, but in the right side, corresponding to natural situation in the left. Its walls were thickened and cavities somewhat enlarged.

Remarks.—It is to be regretted that a

thorough examination was not made. Permission was given to make the examination but a short time before the hour appointed for burial. The malformation consists in but one lung. So far as I know there is not a single instance on record of the kind. The situation of the heart is not to be wondered at. As there was no resistance in the right side, the lung in the left would evidently force it over to the right side.—*Cincinnati Lancet and Observer.*

A FRAGMENT OF KNIFE-BLADE LODGED IN THE CHEST FOR TWELVE YEARS.—Reported to the Morgan Co. (Ill.) Medical Society, June 9th, 1870, by J. F. SNYDER, M.D., of Virginia, Cass Co., Ill.—J. T., sixty years of age, stout and robust, usually, of active habits, suddenly commenced declining in health, without apparent cause. When I was consulted, he had been, as he expressed it, "under the weather for five or six weeks." His symptoms were a troublesome, dry cough, furred tongue, loss of appetite, emaciation, hectic night-sweats, and pain in the right side. Previous to the initiation of this train of symptoms, which he attributed to "catching cold," he had always enjoyed excellent health, "excepting," as he said, "occasional twinges of rheumatism, for the last dozen years, under the right shoulder-blade," whenever he exerted himself at any kind of manual labor.

The chest examined, revealed a portion of the right lung, two or three inches in diameter, just below the nipple, entirely impervious to air, and all the organ below that, very dull on percussion. The left lung was evidently healthy, though overtaxed by its vicarious labor.

The *diagnosis* suggested was *circumscribed pneumonia*, originating, perhaps, in the increasing size and consequent pressure of some isolated tubercular mass.

The *treatment* ordered consisted of stimulating expectorants, mineral acids, and counter-irritants. For four weeks more the case continued without change, save a gradual aggravation of all the symptoms, increased dyspnœa, and free expectoration, when one day, in a hard paroxysm of coughing, the patient threw up, from the right bronchia, an ounce or two of pus and a hard substance, which attracted his attention by the force with which it struck the floor. On examining the substance, it proved to be the *point of a knife-blade*, an inch in length, half an inch in width, and weighing half a drachm. The fragment of steel was much corroded and pitted by oxydation.

The patient now remembered a circumstance he had entirely forgotten—that *twelve years* before this, in a street fight, at Beardstown, in which himself and several others had been engaged, he had been "stabbed in the back, about the lower point of the shoulder-blade," but as the wound gave him no pain and soon healed, he had no suspicion that any part of the blade had remained embedded in his body. The true pathology of the case was now manifest, and the patient rapidly recovered his health. —*The Chicago Medical Examiner.*

A NEW ANTI-PERIODIC.—Dr. Lorinser of Vienna gives, in the *Wiener Medizinische Wochenschrift*, for May 14th, the results of a number of observations made regarding the effect of a new remedy for intermittent fever. The remedy is the tincture of the leaves of the *Eucalyptus globulus*, a plant of the natural order *Myrtaceæ.* In 1869, Dr. Lorinser made some experiments, the results of which he published; but he was brought to a standstill by the want of a supply of the medicine. The plant has since been cultivated by Herr Lamatsch, an apothecary; and a sufficient quantity of tincture has been made from the leaves to supply a number of medical men in the districts of the Theiss and Danube, and in the Banat. The records of fifty-three cases of intermittent fever in which the eucalyptus was administered have been communicated to Dr. Lorinser; and he gives very brief outlines of each, with the following summary of the results obtained. Of the fifty-three patients, forty-three were completely cured; in five, there was relapse in consequence of a failure of the supply of the tincture of eucalyptus, and quinine had to be employed; two of the cases were not true ague; in one case neither the eucalyptus nor quinine cured; in one the medicine (as well as other remedies) was vomited; and in one the patient would not allow the treatment to be continued. In eleven of the cases, quinine had been used without effect; and nine of these were cured by the eucalyptus. There was return of the fever in ten cases, at intervals varying from one to four weeks; in five of these quinine had to be used in consequence of there being no tincture of eucalyptus, and in the other five the eucalyptus was successfully employed. The tincture is said to be easily made, and to have a pleasant aromatic taste; it acts favorably on the digestive organs. Dr. Lorinser believes that in it we have a valuable remedy for intermittent fever.—*British Medical Journal.*

Medical Miscellany.

POSSIBLE DURATION OF PREGNANCY.—In the course of an action for damages for the seduction of a young woman, the question of the possibly protracted duration of gestation was raised. The alleged father had had no access to the mother of the child later than 301 days before its birth, and he naturally disputed his liability. Dr. Tanner deposed that the ordinary period was 270 to 280 days, but might be exceeded by two, three, or even four weeks. He thought there was no inconsistency in the present case (from April 15th to Feb. 9th—that is, 301 days). He had not known any case himself in which the ordinary period had been exceeded by a week, but he had no doubt there were such cases. He had heard of such. Mr. James F. Clarke deposed that there were cases on record extending over more than 301 days. Sir James Simpson had recorded a case of 310 days. Dr. Barnes deposed that the ordinary period was 271 days. He had known cases of 280 and of 285 days. He thought it very improbable, but did not like to say it was impossible, for gestation to extend over 301 days. It was so improbable that he did not believe it. Dr. Tyler Smith said that the longest period of excess he had known was a fortnight. Dr. Reid—a most acute observer—had recorded forty-three cases of protraction, the longest of which was 300 days. Dr. Smith considered that case as reliable as any doubtful case could be. The verdict was for the plaintiff; damages £300.—*British Medical Journal.*

A NEW POISON.—At a recent meeting of the California Academy of Sciences, Dr. Stout presented some specimens of an unknown umbelliferous plant, popularly known as "wild parsnip," which had been sent to him from Ruby Valley, Nevada, by Lieut. Carpenter, of the United States Army. Three men had eaten some of the root; in about half an hour they were seized with vomiting, followed soon by convulsions and unconsciousness. Two of them, who had each eaten a whole root, died at the end of about an hour and a half; the other, who had taken a small portion only, recovered. The symptoms are described by Lieut. Carpenter as resembling, with the exception of loss of consciousness, those of strychnia poisoning; the hands were clinched, the face distorted, and the head thrown back almost under the back of the neck. The plant grows in marshy places, and smells and tastes like a parsnip.—*Druggists' Circular.*

CIRCUMCISION.—We observe in the last number of the *Imparziale* a vigorous attack upon the practice of circumcision, from the pen of Dr. Sonsino, who is of opinion that the advantages obtained in a hygienic point of view from the indiscriminate performance of circumcision, are not sufficient to compensate for the ill effects that may ensue; that the principles of medical ethics do not allow of its performance as a prophylactic against venereal affection; and that, as a religious rite, it is deserving of condemnation.—*Nashville Journal of Medicine and Surgery.*

PERMANGANATES FOR FETID EXPECTORATION.—An interesting case occurred in the wards of the hospital at Grenoble, under Dr. Charvet. A man of 43 years of age, consumptive, suffered terribly from the offensive nature of his expectoration, which compelled him to be placed in a separate room. Carbolic acid was prescribed, but produced only the slightest effect. Dr. Charvet then tried solution of permanganate of potash in water. The success was very striking, the stench at once being diminished, and in the course of ten days quite removed.—*Medical and Surgical Reporter.*

M. AMUSSAT'S LITHOTOMY FORCEPS.—This surgeon has had forceps constructed the branches of which, when in the bladder, may be brought to a right angle with the handles, so as to seize hold of the stone in the fundus. The mechanism consists mainly in a rack worked at the junction of the branches.—*Medical Record.*

CATHETERISM OF THE LARYNX.—Dr. Weinlechner, of Vienna, considers catheterism of the larynx, next to tracheotomy, the safest and most rational resort in cases of imminent suffocation during croup and diphtheritis.—*Ibid.*

TO CORRESPONDENTS.—Communication accepted:—Case of Impacted Calculus in the Urethra; External Urethrotomy; Recovery.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending Aug. 13, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases	
		Cholera Infantum.	Consumption.
Boston	158	41	16
Charlestown	15	7	3
Worcester	33	9	7
Lowell	24	4	3
Milford	7	2	1
Chelsea	11	1	2
Cambridge	23	13	3
Salem	16	5	4
Lawrence	9	2	2
Springfield	15	2	1
Lynn	15	7	1
Pittsfield	8	4	0
Fitchburg	2	0	0
Newburyport	6	3	0
Fall River	19	5	4
Haverhill	6	1	2
	367	106	49

From all the above places there are reported twenty-four deaths from dysentery and diarrhœa, eleven from cholera morbus, and two from sunstroke.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, Aug. 13th, 158. Males, 78; females, 80. Abscess, 1—accident, 7—apoplexy, 2—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 3—inflammation of the brain, 1—bronchitis, 1—cholera infantum, 41—cholera morbus, 2—consumption, 16—convulsions, 2—debility, 5—diarrhœa, 12—dropsy, 1—dropsy of the brain, 3—drowned, 2—dysentery, 4—epilepsy, 2—scarlet fever, 1—typhoid fever, 3—gangrene, 1—gastritis, 3—hæmorrhage, 1—hip disease, 1—disease of the kidneys, 1—congestion of the lungs, 3—inflammation of the lungs, 5—marasmus, 2—measles, 2—old age, 4—paralysis, 1—pelvic cellulitis, 1—premature birth, 4—peritonitis, 1—puerperal disease, 4—disease of the spine, 1—suicide, 1—sunstroke, 1—teething, 1—unknown, 8—whooping cough, 1.

Under 5 years of age, 88—between 5 and 20 years, 7—between 20 and 40 years, 29—between 40 and 60 years, 21—above 60 years, 13. Born in the United States, 118—Ireland, 31—other places, 9.

Fig 2

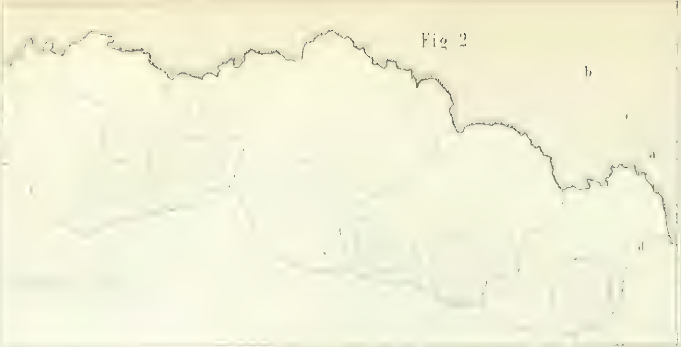


Fig 3

Fig 6

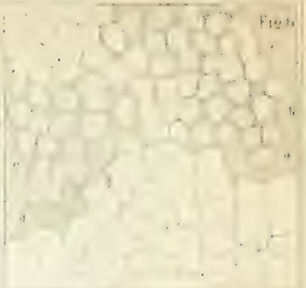


Fig 1

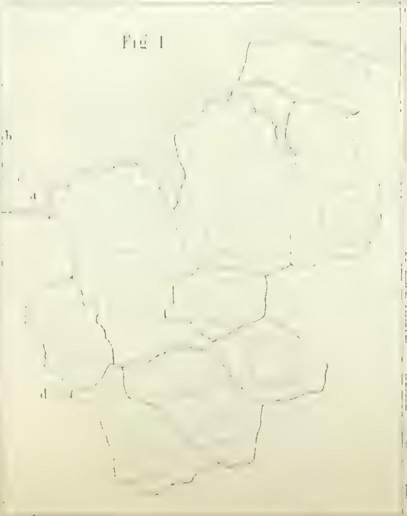


Fig 8

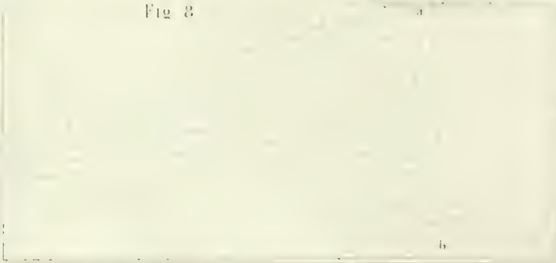


Fig 7

Fig 5

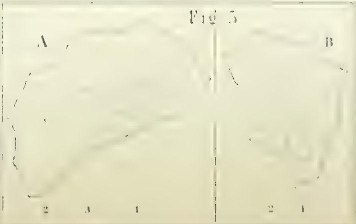
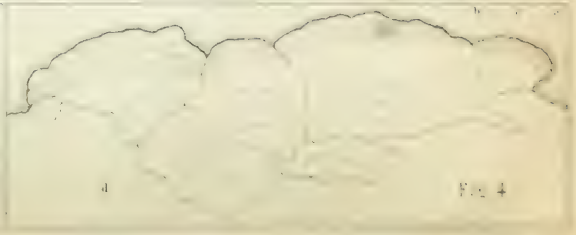


Fig 4



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Original Communications.

THE REGENERATION OF THE EPITHELIUM OF THE CORNEA.

By O. F. Wadsworth, M.D., of Boston, and Prof. C. J. Eberth, in Zurich.

Prof. Arnold, of Heidelberg, by a series of investigations published in the 46th vol. of *Virchow's Archiv*, has added a new view to those which had previously prevailed as to the manner of regeneration of the epithelium of the cornea, as well as of epithelium in general. Although this investigator did not succeed in obtaining a perfectly clear idea as to the details of the regenerative process, the following may still be considered as the result at which he arrived. Neither the connective tissue nor the remaining epithelium alone reproduces the lost epithelium, but the former with the influence of the latter. Arnold, indeed, states this nowhere with perfect distinctness; but from his whole description the unprejudiced reader derives this formula.

Arnold found on the surface of the cornea of the frog, where the epithelium had been removed by brushing with a camel's hair pencil, or by moistening with the tincture of cantharides, a finely granular substance. If the space from which the epithelium had been removed was small, it was completely filled by this substance; in greater spaces the substance was present only at the periphery. Next the edge of the epithelium this substance becomes homogeneous—protoplasma—and soon separates into plates (platten) of from double to tenfold the diameter of the ordinary cells. The actual regenerative processes take place in this protoplasma. Shining points (nucleoli) appear in the smaller plates which arise from division of the larger, and later faint circles appear around these nucleoli, the first indications of the contour of the nucleus. These circles become constantly more distinct, while at the same time the homogeneous substance of which the plates consist, first in the peripheral portion, and then throughout, becomes finely granular, similar in appearance to the protoplasma of the normal epithelium. This substance of the nuclei has meanwhile assumed a more granular character. Arnold therefore regards the finely granular zone at the epithelial edge as the matrix of that clear protoplasma which by division becomes new epithelium. On the other hand, he is less certain as to the origin of the finely granular substance itself. Although he does not deny the possibility that it is an exudation from the peripheral epithelium, which finally becomes protoplasma, let us say, again becomes cells, still he prefers to regard it as the product of the corneal tissue. The close connection of the edge of the epithelium with the corneal tissue; the enlargement of the corneal corpuscles in the neighborhood, and the fact that they are more completely filled with a finely granular substance; and, finally, the new formation of epithelium on the surface of connective tissue, independently of the surrounding epithelium, seem to him to speak in favor of this view. The last point Arnold states he has observed on the hard palate and skin of the head of the dog, after preventing healing from the periphery. He does not, however, entirely deny the influence of pre-existing cells; he thinks rather that these act in determining the character of the newly formed parts.

We have sought to test these views by means of our own investigations. If tincture of cantharides be dropped upon the cornea of the frog, the epithelium, so far as this is exposed to its action, becomes immediately opaque, and after a short time may be removed as a continuous membrane. Collodium and ether have a like effect. Still one succeeds generally only after repeated applications in removing the epithelium in continuo together with the collodium-coating. A single thorough application of these reagents is, however, sufficient to kill the cells, and so far to loosen their connection with the cornea, that a light brushing with a camel's hair pencil or the finger is sufficient to lay bare the corneal tissue. We have generally used collodium in our experiments in order to avoid the greater irritation which is excited by tincture of cantharides. With some precaution, the epithelium may also be removed without injuring the corneal tissue, by scratching with a sharp knife. After the use of collodium or ether, the dead cells, observed fresh in aqueous humor, appear shrunken, their protoplasma opaque, the interstices between them wider; and their adhesion to the underlying tissue is greatly diminished. After immersion of the cornea for one or two minutes in a solution of one fourth per cent. of arg. nit., the spaces between the dead cells are filled with a thick precipitate of silver, and the cells themselves are darker colored than the still remaining normal cells. Thirty-six to forty-eight hours after the application of the collodium, the dead epithelium, perhaps with the exception of a few cells of the deepest layer, which remain *in situ* longest, has entirely disappeared. The edge of the unaffected epithelium is sharply defined; the corneal tissue bare to an extent proportionate to the surface which has been acted upon.

Before the dead cells have entirely disappeared, about twenty-four hours after the application of the collodium, the boundary between the normal and dead epithelium may, in arg. nit. preparations, be plainly seen. The normal epithelium appears clear and uncolored; the dead, opaque and brown. The cells of the latter are considerably smaller than those of the former, since they belong almost exclusively to the lower layers. The dead cells are also distinguished by a somewhat larger, round nucleus, and nucleolus. In many places in the neighborhood of the edge of the epithelium the dead cells are already pushed aside. The corneal tissue, so far as it is bare, is brown and opaque from a fine punctiform precipitate of silver. The clear normal cells, arched forward toward the centre of the cornea, stand sharply forth against the dark surroundings, having a narrow dark outline, the continuation of what appears as a line bounding the individual cells.

In other places the boundary of the normal epithelium is less distinct, the edge of the innermost cells, which are already in process of regeneration, being covered by a few dead cells. The growth of the peripheral cells is, therefore, spite of the presence of some dead cells, not prevented, since the growing epithelium undermines the still adherent dead cells.

The finely granular substance which, as Arnold states, fills the loss of substance in the epithelium, or makes a narrow border for it, is neither by this method, nor by that followed by Arnold, always present, and seldom occurs except in silvered preparations, while even in these it is not constant. This reason alone is sufficient to lead us to ascribe to it only a subordinate importance in the epithelial regeneration.

According to Arnold, the finely granular mass is changed into a homogeneous protoplasma, out of which only at a later period the new epithelium arises. It is difficult, however, to reconcile this assertion with the sharp boundary of the epithelium toward the granular substance, since we can scarcely consider that, in the whole length of the border, a sudden, equal metamorphosis takes place in that part of this substance which is directly in contact with the epithelium, and that its change into the homogeneous protoplasma is everywhere so perfect that the boundary between them never appears indistinct, nor allows a gradual melting of the one into the other to be observed. From the absence of the finely granular zone in many preparations, the conclusion might be drawn that it only remained a short time, and disappeared as soon as regeneration had fairly begun. This, also, we cannot allow, for the reason that it is seen almost exclusively after the use of arg. nit. This reagent, as already mentioned, produces upon the corneal surface a finely granular precipitate, particularly where it is covered with the *débris* of dead cells, not to speak of the thin layer of secretion from the conjunctiva, which by the movements of the globe and lids is pushed against the border of the epithelium, and here heaped up in the angle between it and the stroma.

The dark coloring of the bare silvered corneal tissue frequently extends over the boundary of the epithelium from one to five micromillimetres. The breadth of this dark border varies in many places, diminishing correspondingly to the incurvations at the edge of the epithelium, and it often shows several, usually three to five, seldom as many as ten, lines, which run parallel to the epithelial edge. These lines appear to arise from a successive diminution of the thickness of the protoplasma of the cells. Toward the periphery the color of the border gradually fades, yet its outer boundary has a sharp, though delicate contour. Arnold regards the portions of this border between the incurvations as plates, which project over the edge of the clear protoplasma-plates situated outside of it. He gives, however, no farther explanation of the import of this appearance. The term plates (platten), we think, should not be used to describe the separate portions of this border, as one might thus be led to regard them as isolated bodies lying upon the corneal substance or imbedded in it. In fact, the border belongs to the corneal tissue itself, and evidently arises from the extension of the coloring of its substance produced by the silver, beyond the edge of the epithelium. If the epithelium be loosened and pushed aside from the parts underneath it by gentle pressure and sliding of the covering glass, which is easily accomplished after the application of glycerine and a little acetic acid, one is immediately convinced of the truth of this. Although at the same time the cells at the edge be broken up, the dark sub-epithelial border is plainly visible, passing over continuously into the dark color of the basis substance.

If we observe the freshly excised cornea of the frog, on which the epithelium is in process of regeneration, in aqueous humor, carefully avoiding all pressure, the epithelium appears as a homogeneous, water-clear, transparent layer, which at most, in many specimens, contains a few very fine granules in its substance. Nuclei are seen only here and there, and not very distinctly. The parts immediately bordering the loss of substance are not more hyaline than those in the periphery. On the other hand, it must be admitted that, on dead corneas the epithelium at the edge, on account of its lesser thickness, always appears somewhat clearer than the remainder. Only after waiting some time (half an hour) do the boundaries of the single cells distinctly appear. If Arnold did not wait till this period the circumstance is easily explained that he saw in the break in the epithelium only homogeneous, amorphous protoplasma. Even in silver preparations we do not find so large fragments of protoplasma as Arnold describes. Still, the elements of the edge are generally greater than the other cells, which they exceed two or three fold in dimension. Toward the periphery the size of the cells diminishes gradually. If we consider the cells as divided by concentric circles running parallel to the free boundary of the epithelium, the distance between them corresponding to the diameter of the individual cells, the inner zone will be the widest, while those immediately outside will be intermediate in width between it and the more peripherally situated ones. Certainly, here and there, isolated larger cells will always be present in the outer zones also.

Arnold states further that, in the innermost parts of the hyaline protoplasma small nucleoli first appear, and later the actual nucleus-substance around them. If we have rightly understood this author, these young nuclei, by means of the formation of new protoplasma toward the centre of the cornea, take a position farther from the edge. In his view, the more outward portion of the protoplasma appears granular and contains formed nuclei, while the inner, hyaline portion contains young nuclei and free nucleoli. So far as the appearance of free nuclei and nucleoli is concerned only, we are not disposed to deny this method of formation, but we must still assert that it is not a constant one. Much more frequently one meets with cells on the immediate edge of the epithelium, which contain peripherally situated nuclei in process of division, but no free nucleoli. Arnold appears to have over-estimated the number of the latter. Frequently the nucleoli are surrounded by a narrow, clear, but sharply defined zone, the outer boundary of which may, even if not very distinctly seen, be considered as that of a young nucleus. But one also finds, after the addition of reagents which make the outline of the nucleus quite distinct, free nucleoli, and near them, in the same cell, a similar one with a sharp nucleus-contour closely surrounding it, sufficiently often to make us consider a free formation of nuclei, as well as single and double division of the original nucleus, as very probable. At the same time we still believe it possible that the smaller nucleus originates from the greater one.

The epithelium grows at the edge of the loss of substance by increase in size and division of the marginal cells. The growth seems, however, not to be limited to the margin alone, but also to take place in the continuity of the original epithelium. At least, the presence of isolated larger cells with nuclei in process of division, scattered among the other cells at some distance from the edge, as well as the occurrence of division of nuclei in cells of ordinary size, seems to sanction this view; all the more, since a similar method of growth has been shown with certainty in plants. (Spirogya.) That the large marginal cells themselves divide, after the division of the nucleus, we conclude from the delicacy of the lines which here bound the separate cells. These lines, even on silver preparations, are often scarcely to be distinguished, and on living corneas, viz., observed fresh in aqueous humor, are with great difficulty or not at all to be seen.

The foregoing description refers almost exclusively to corneas prepared with arg. nit. We omit the results obtained from the observation of corneas treated with chloride of gold and Mueller's solution, as they offer no new points of importance. We have investigated only a few living corneas in aqueous humor, and not much longer than three or four hours, since we soon convinced ourselves of the rapid death of the epithelium, even when the aqueous was frequently renewed.

The process of nourishing the cornea in the lymph space under the skin of the frog, after the epithelium had been removed from a small space by the knife, gave us no satisfactory results. While small losses of epithelium, on corneas otherwise undisturbed, were completely restored at the end of two days, we were unable to observe any certain signs of regeneration at the end of this time on those placed in the lymph space. These investigations were, indeed, made in the late fall and winter, and it is quite possible that this time of year is not particularly well suited for them. It is also very difficult by this method to avoid the adherence to the surface of the cornea, of groups of blood-corpuscles, which obscure the view of the other cells.

After simple brushing with a camel's hair pencil, as after the treatment with cantharides or collodium, small islands of epithelium, consisting of a few or single cells, often remain attached. Arnold thinks that these islands finally die, as he could not observe in them division of nuclei, or any other sign of new formation. So far as the cornea treated with the before mentioned solutions is concerned, we agree in this entirely with Arnold, provided that the effect has been sufficiently intensive to kill also the most deeply situated cells. One sees occasionally these dead cells at the end of three or four days. They are distinguished by the large shining nucleolus, the opaque contents, and the indistinct, as if corroded, contour. Often also the network of cement substance between the cells, with some protoplasma debris, remains a long time.

The behavior of the epithelial islands on such corneas as have not been exposed over the whole surface to the action of cantharides or collodium, but in the centre of which small portions of epithelium remain, is a different one. To better observe the changes in such cases, we have removed, by scratching with a sharp lancet, the epithelium up to the scleral border, with the exception of a square or circle, situated over the pupil, about a millimetre in diameter. During four days the operation was daily repeated, so far as was necessary to destroy any newly formed epithelium at the periphery. At the end of four days * the clear islands of epithelium, particularly in silver preparations, stand out clearly against the brown basis substance. At the periphery of the cornea no epithelium is to be seen, on the basis substance far and wide are no normal cells, but only single, very much changed, dead cells. The outer boundary of the island shows many projections, even when the original boundary was a sharply defined straight line. Many of the cells immediately contiguous to the edge present no special differences from the marginal cells of the peripheral epithelium when the loss of substance has been a central one, perhaps with the exception of the large number of nuclei and nucleoli (we have seen from five to six of the former) in many of the larger cells. The inequalities of the edge are not, however, as in the previous cases, produced only by single cells which project farther forward, or by small projections from them, but also by numerous club or twig-shaped outshoots, which may even unite with each other to form a net-work. These outshoots consist of cells with a somewhat flat surface, containing one or two large nuclei. The size of these cells is about double that of the white blood-corpuscles. Their number varies from two in the youngest outshoots, to forty and more in the larger. A few of the most peripheral of the cells remain in connection with the others only by a narrow surface; still others have already become perfectly isolated, and are separated from the rest by a narrow interspace.

Probably the apparently independent regeneration of epithelium takes place in this manner, and that the cases of epithelial regeneration from connective tissue, which Arnold states he has observed on the hard palate and skin of the head of the dog, may be thus explained. In all Arnold's experiments the excision of the edge of the wound was made scarcely earlier than the tenth or fourteenth day after the excision of the piece of skin. This is too late, as it seems to us, to prevent the objection that, the free islands of epithelium, which he observ-

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* We intentionally omit the changes seen after a shorter time, since they presented nothing particularly noteworthy, but only similar pictures to those which we have already mentioned in describing the growth from the periphery.

ed, arose from the outshoot, from the periphery, and had become separated from their base by abundant granulations or by growth.

The cells at the base of the outshoots are in immediate connection with cells of the main island, of the same or somewhat greater size. Nowhere is a trace of a hyaline protoplasma to be seen. Even the finely granular zone, which, as Arnold says, always borders this protoplasma toward the loss of substance, is often wanting. The central cells of the island show throughout the same appearance as those of the normal cornea, except that an unusual number of them are in process of division, or contain several—three or four—nuclei.

Even small islands of epithelium therefore, although situated at a considerable distance from the vascular system, continue to live. They produce new epithelium, even if somewhat more slowly than the epithelium remaining after central loss of substance; and the regeneration always takes from the epithelium which had remained toward the defect.

Should the objection be made that, the outshoots of epithelium from the edge of the island are remains of the original epithelium, we reply that the lesser size of the cells, which decidedly distinguishes them from the ordinary epithelium, as well as their presence in islands which have been previously sharply defined by the knife in the form of a parallelogram, is a sufficient answer.

That amœboid cells take part in the new formation we were unable to show on frogs whose lymph space had been previously injected with finely divided coloring matter. Although the number of colored amœboid cells was in many cases much increased, we saw nowhere signs of a transformation of them into actual epithelium. The fact that the cells at the margin of the epithelium are already enlarged, at a time when the colorless contractile elements of the cornea are little, if at all, increased, and when in the neighborhood of the margin no such elements are present, shows also that the regeneration may, at least, take place without their intervention.

The results of our experiments on mammals (rabbits and guinea pigs) were similar. Here, in order to secure the perfect removal of the epithelium, at least over a certain space, we removed also the outer layers of the corneal tissue. By careful dissection a large portion of the surface layers may be removed in one piece. A pretty severe conjunctivitis and keratitis followed this procedure, but already in eight or ten days quite large losses of substance were completely closed over by epithelium. These cases also furnished nothing new of importance to add to what has been already related. Here, as in the frog, an enlargement and division of the marginal cells, without the intervention of a free protoplasma, and a growth of epithelium toward the loss of substance, took place.

The experiments by which, after total removal of the epithelium, we sought to prevent growth from the periphery, agree entirely in their results with those already mentioned. We used for this purpose exclusively frogs, and the whole of the epithelium was removed with a lancet to beyond the scleral border. This operation was repeated daily over a breadth of 1½ to 2 millimetres at the edge of the cornea, without disturbing the central portion. Unfortunately we were obliged to break off this series of experiments sooner than we had intended, on account of threatened loss of our animals.* For this reason we interrupted our experiments after eight or nine days.

The corneas of these animals, after preparation with arg. nit., showed, at the most, very small islands of epithelium quite near the scleral border. These were, however, even in the same frog, so inconstant, that we were led to regard them rather as unremoved fragments of the original epithelium, or of that which had grown from the periphery, than as independently formed islands, especially as the repeated removal of the epithelium from the neighborhood of the scleral border is rendered difficult by the swelling of the conjunctiva and lids.

The rest of the cornea was in many cases covered with a large number of amœboid cells (pus-corpuscles). When these lay together in small groups, they were slightly flattened on the contiguous surfaces (compressed granulation tissue). Near these cells appeared, singly or in groups of two or three, a few delicate, spindle-shaped or polygonal cells, two or three times as large as the granulation cells, consisting of finely granular protoplasma, and provided with a large bladder-like nucleus. We could not observe in them amœboid movements. With regard to the origin of these latter elements we are still in doubt. We cannot deny the possibility of their origin from the granulation cells, as many of these also were found with a larger nucleus. But whatever way be their origin, so much is certain; at the period mentioned no central islands of true corneal epithelium exist. The presence of isolated smooth cells upon the corneal surface offers so much the less proof of the origin of the outer epithelium independently of the original epithelial covering, since also in the corneal tissue, according to Carl Friedrich Mueller (Virchow's Archiv, Vol. 41), cells similar to those of the co-called serous epithelium are not very infrequently present.

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* An epidemic among our frogs had destroyed many of them.

Explanation of the Illustrations.

Fig. 1. Surface view of a portion of a frog's cornea, three days after removal of the epithelium by collodium. a. Border of epithelium in process of regeneration. b. Corneal tissue. c. Finely granular substance which forms a narrow border at the epithelial edge. d. Young nucleus. Prepared with arg. nit. Objective 9 and ocular 2, Hartnack. Drawn with the camera lucida.

Fig. 2. Another part of the same preparation. a, b, c. As in Fig. 1. d. Border of the protoplasma of the marginal cells, which have been pushed outward. Magnified and drawn as in Fig. 1.

Fig. 3. Surface view of the cornea of a rabbit, three days after the removal of the epithelium and outer layers of the cornea, with the knife. Letters and preparation as above. Objective 5 and ocular 2, Hartnack. Camera lucida.

Fig. 4. Frog's cornea prepared as in Figs. 1 and 2. a, b, c. As in Fig. 1. d. The dark border of the corneal tissue interrupted by several parallel lines. Magnified and drawn as in Fig. 1.

Fig. 5. A. B. Two marginal cells of the regenerating epithelium of the frog's cornea. Preparation and magnifying power as in Fig. 1. A. 1. Original nucleus; 2. Young nucleus surrounded by a narrow, clear zone; 3. Nucleolus surrounded by a delicate but plainly contoured border. B. 1. Old nucleus; 2. Young incurved nucleus, with two nucleoli.

Fig. 6. Regeneration of epithelium of frog's cornea, after the central portions had been killed by collodium, but not removed. a, b, c. As in Fig. 1. d. Dead epithelium lying above the marginal cells. e. Dead, but still attached epithelium. Prepared, magnified and drawn as in Fig. 3.

Fig. 7. Outshoot from an island of epithelium allowed to remain in the centre of the frog's cornea, with prevention of new formation from the periphery. a. Separated epithelial cell. b. Edge of the main island. c. Corneal tissue. Objective 5 and ocular 3, Hartnack. Prepared and drawn as in Fig. 1.

Fig. 8. From the same preparation as Fig. 7. a. Junction of the outshoots of epithelium. Objective 7 and ocular 3, Hartnack.

"I suppose," said a quack, while feeling the pulse of a patient who reluctantly submitted to solicit his advice, "I suppose you think me a bit of a humbug?" "Sir," gravely replied the sick man, "I was not aware until now that you could so readily discover a man's thoughts by feeling his pulse."

CASE OF IMPACTED CALCULUS IN THE URETHRA. EXTERNAL URETHROTOMY. RECOVERY.

By M. F. Gavin, M.D., F.R.C.S.I., &c., Surgeon to Out-patients, City Hospital, Boston.

Henry M., a delicate lad, aged 10 years, born in South Boston and always lived there. Has had the diseases usual to childhood. No pump-water on the premises where he lives. About December, 1868, mother first noticed his water grow cloudy and thick, but free from blood, while the act of urinating caused intense pain in the region of the bladder, extending up towards the lumbar region. From January, 1869, until May of the same year, patient's general health failed, and incontinence of urine and severe "attacks of gravel" became frequent, when he entered the City Hospital under the care of my predecessor, the late Dr. Ropes, who failed to detect stone. Under treatment and rest he rapidly grew better, and left the hospital, feeling well. For some time after leaving the hospital he remained free from all symptoms of his trouble, except after severe exercise, when the pain in making water returned, and once or twice he suffered from retention, which was relieved by a hot bath.

Early in the autumn the "fits of gravel" returned, grew more severe, lasted longer, and were not relieved by the warm bath. About this time the patient had a very severe hæmorrhage from the urethra, probably caused by a rupture of a small portion of the urethra from the great straining of the patient during an "attack of gravel."

My first visit to him was in January, 1870, when he was suffering from one of these attacks, of unusual severity, which had lasted more than two days at the time of my visit. Three days before my visit the lad took severe exercise in running and jumping off a shed fourteen feet high to the ground, and that night began to complain of pain in urinating, extending up the urethra, and passing only a few drops at a time. There was constant pulling of the prepuce; no sleep; hot and feverish; appetite gone.

It was evident something should be done, and at once, as the little fellow was in agony; the bearing-down pains were really distressing to bear, hardly leaving the patient for a moment, and unless something were done, the bladder, which extended almost up to the umbilicus, was in danger of being ruptured.

A warm bath was first tried, without any benefit; when I attempted to pass a No. 5 elastic catheter, but failed, owing to the pain and restless condition of the patient. The parents would not allow ether or chloroform to be given, preferring to wait a few hours before any operative measures were undertaken. After trying opiates and the warm bath for a few hours without relief, ether was given, when a foreign body could be felt filling the urethra about an inch in front of the bulb, which was shown, on passing a sound, to be an impacted stone. The parents preferred to have a consultation, when Dr. Thaxter was called in and gave me his valuable assistance during the operation.

An effort was first made to extract the stone with a long narrow forceps, but it failed. Dr. Thaxter held the stem firmly and drew back the scrotum, while an incision was made in the raphé just anterior to the scrotum: the stone was now pressed forward toward the cut and withdrawn by a forceps.

Very little bleeding followed the operation. A No. 5 elastic catheter was passed through the entire length of the urethra and retained by straps; the edges of the wound were brought together by two very firm silk sutures, with the expectation of obtaining union by first intention, as the wound did not differ from any ordinary flesh wound as long as the urine was not allowed to come in contact. An opiate was ordered in case he became restless.

Jan. 17th, twenty-four hours after operation. Patient had a very good night, slept well; no occasion to give opiate. Free flow of clear urine through the catheter; not any through the wound. Pulse 88; no heat of skin or headache; tongue clean. Cold-water dressing and milk diet.

18th.—Slept well; no heat of skin or headache; pulse 70; tongue clean and moist; wound partly united; sutures removed. Catheter withdrawn and larger one (No. 6) put into the bladder, with considerable difficulty.

19th. — Pulse 104; skin hot; tongue moist and coated. No swelling or redness of scrotum. Some pain in the right iliac region. A few drops of urine came through the wound. Catheter taken out. Cold-water dressing; liquid diet, and a saline purgative.

20th.—Pulse 68; tongue clean and moist. Bowels moved yesterday. Urine all came through the normal passage, without causing any pain.

21st.—Pulse 66; tongue clean; appetite good. Wound not quite healed; a few drops of urine came through this morning.

22d.—General condition excellent. Passes water freely and without pain, a few drops escaping through the lower angle of wound. No. 6 catheter passed and allowed to remain in for ten minutes. Wound touched with nitrate of silver.

From this time forth the patient did well, and was allowed his usual diet. Catheter (No. 6) was passed every third day for two weeks, when the wound was firmly united.

The unsettled state of many minor points in surgery was very well shown in this case.

1st. Was it better to remove the stone from that part of the urethra where its further progress was arrested, or to press it back towards the perinæum or membranous portion of the urethra? The latter proceeding is strongly advocated by Mr. Erichsen, who dreads the infiltration of urine taking place if the urethra is opened anterior to the scrotum, and if infiltration does not take place we are very apt to have a fistulous opening remain. No doubt Mr. Erichsen's suggestion has the advantage, that if other stones are present Allerton's or the lateral operation for stone may be done without waiting. On the other hand, if, as in the case reported, the stone is firmly impacted midway in the spongy portion of the urethra, to press it back to the membranous portion must lacerate the urethra, which is quite likely to be followed by infiltration of urine or organic stricture.

2d. Was it better to pass a catheter after the operation, or allow the urine to come in contact with the fresh wound in the urethra? On this point systematic works on surgery have nothing to say, while practical surgeons differ in practice. In the case reported we think the healing process would have been slower if the urine had been allowed to come in contact with the wound.

TREATMENT OF ECZEMA.—Dr. Kent Spencer, of Bath, has found black wash useful as an application in eczema rubrum of the legs, mixed with a tenth part by measure of glycerine. Linen rags are soaked in this and laid on the parts and kept *in situ* by a bandage, but no oiled silk used. He renews the dressings twice daily, wetting them with warm water before removal. He has recently almost always been successful in such cases by this plan.—*Canada Medical Journal.*

Selected Papers.

FIBROUS TUMOR OF THE BLADDER SUCCESSFULLY REMOVED.

By A. Reeves Jackson, M.D., Chicago, Ill.

Mrs. K., a resident of Monroe county, Pennsylvania, aged 40 years; married; is the mother of four children, the youngest of whom is ten years old. She is of spare habit of body, and for a number of years has been afflicted with a large femoral hernia of the right side, for which mechanical support has been used. Her general health has usually been good.

I was called to see her December 9, 1869, and obtained the following history: During the past four or five weeks she had experienced a rather frequent desire to urinate, the passage of the water being attended with more or less pain. On several occasions the urine had been bloody. These attacks of irritability of the bladder although becoming latterly quite frequent, were not of long duration—rarely lasting more than ten or twelve hours—and had not been sufficiently severe to impel her to seek medical advice. Six days previously (3d inst.), after one of these attacks she suddenly found herself quite unable to urinate. There was a constant painful effort to do so, accompanied with many ineffectual straining efforts. A practitioner residing in the immediate vicinity was called to see her, and a variety of powerful diuretics, purgatives, &c., were prescribed. The pain meanwhile became constant and increased in severity. In the course of two or three days the urine began to dribble away, and the patient being unable to sit up, the bedding soon became saturated. Believing that his remedies had been *too effectual*, the doctor (*sic*) now commenced prescribing others, with the view of checking this profuse flow. Among these opium was given, and although it did not lessen the incontinence, it yet served a good purpose, by procuring partial relief from pain.

At the time of my visit she was still under the influence of an opiate given the previous evening. Her skin was cool and moist; tongue covered with a dry brownish coating; pulse 120, small, with a quick, sharp beat. The lower part of the abdomen was much distended, and yielded a dull sound on percussion. During the examination the patient became sufficiently aroused to recognize me, and begged that I would do something to relieve her. I introduced a catheter and drew off nearly six pints of stale, bloody, rather offensive urine, with very great relief. Suddenly the flow stopped. The enlargement of the hypogastrium although very much lessened was still distinctly perceptible, presenting the appearance of a rounded, well-defined tumor. Under the impression that some obstacle was impeding the further flow of urine, I withdrew the instrument a short distance, and this manœuvre not being successful, removed it entirely, in order to examine the openings. These being quite pervious, I was puzzled, and introduced it again. No urine appeared; and as I attempted to change the position of the instrument somewhat, I became conscious of the existence of an impediment to its usual freedom of motion. I could press it a short distance forward and toward the left side, but a strong resisting body effectually prevented the turning of the instrument, either backward or toward the right side. I passed a finger into the vagina, but could not by any manipulation succeed in feeling the catheter through its walls. A male instrument subsequently introduced gave similar results. While its point could be distinctly felt through the thin abdominal wall when pressed anteriorly, it could not be turned at all toward the right side, and very slightly toward the left; neither could its course be felt from the vagina.

This was at eight o'clock in the evening. The following morning I saw her again at an early hour and learned that she had passed a comparatively comfortable night, sleeping a considerable part of the time. There had been some dribbling of urine, and she was still unable to evacuate the bladder by any effort of her own.

Introducing a male catheter, I removed a little more than a pint of bloody urine, having a strong ammoniacal odor. Again, as on the previous evening, the flow abruptly stopped; again I found that no change either in the direction or position of the instrument was sufficient to restore it; and, again, the evacuation of the bladder did not remove the persistent globular hard tumor of the abdomen. In attempting to carry the instrument about in various directions—which was done in the most gentle manner, and without producing much pain—I found the same difficulty, or rather the same impossibility, as had been noticed the evening before. On the withdrawal of the instrument, I found that its openings were partially closed by clots of fresh blood.

As the patient's residence was about sixteen miles from my own, I left a catheter with the husband, an intelligent German, instructing him sufficiently in its use, and ordered its employment at intervals of eight hours, or oftener if it should seem necessary in order to relieve pain.

I did not see my patient again for six days, at the end of which time I was summoned by telegraph, to visit her as quickly as possible. On my arrival, about noon, the husband informed me that, very early in the morning, his wife had awakened with a more intensely painful desire to urinate than she had experienced at any time since my former visit, accompanied by strong involuntary bearing-down efforts. As she could not void a single drop of urine—had not done so, in fact, since I saw her—he proceeded to introduce the catheter as usual, when, to his great surprise, he found himself prevented by the pressure of a mass of something resembling, as he said, a piece of boiled beef, having a grayish-red color, filling up and slightly protruding from the urethral orifice. In great consternation, he at once started for the nearest telegraph station, one mile distant, to summon me. On his return he discovered that the substance had disappeared into the bladder again. He now introduced the catheter without difficulty, and drew off a quantity of bloody urine, which had been set aside to await my coming, and which I found, on examination, to contain a large quantity of mucus and some pus in addition to the blood.

Several hours having elapsed since the bladder had been emptied, I introduced a catheter, and distinctly felt, as I did so, what I had not experienced on any former occasion, namely, an evident obstruction to its ready ingress. The impediment seemed to yield to moderate pressure, however, and the urine flowed freely. This latter had now a dark brown, muddy appearance, was highly offensive, and contained a large quantity of muco-pus. A small amount of fresh blood followed the withdrawal of the instrument.

With the view of making a more thorough exploration a sponge tent was introduced into the urethra and permitted to remain four hours. On removing it I was enabled to introduce the index finger sufficiently far to perceive the pressure of a tolerably dense mass with a smooth surface occupying the lower part of the bladder, and pressing against and somewhat into the vesical orifice of the urethra. A larger tent was now introduced, and as the presence of the first one had been productive of considerable pain, a full dose of morph. sulph. was administered at the same time. As it was impossible for me to remain with the patient, or, indeed, to see her again in less than twenty-four hours, I directed the husband to remove the tent at the end of four hours; and further, having provided him with polypus-forceps, a tenaculum, ligature-twine, &c., directed him to seize the protruding substance, should it again appear, and secure it against return until my arrival. On the following day he met me as I was approaching the house, and with a triumphant air showed me a small bottle in which was a reddish fleshy-looking mass about the thickness and nearly the length of a finger. It was tough, rather softer in some portions than others, and seemed to have been moulded to the shape of the urethra in its passage. It had made its appearance, he informed me, on the withdrawal of the tent, and he had seized it with the forceps and fingers, and making firm traction (here he had exceeded his instructions), had caused the patient very great pain, and had broken the substance off in the urethra, where he was unable again to reach it. The urethra being now very greatly irritated and excessively painful, it was deemed advisable to suspend, for a time, operative procedures. Cloths wrung out of a hot infusion of opium and arnica flowers were applied to the genitals, and a full dose of morphia given internally. She was also to have the catheter passed at regular intervals; the bowels were to be moved by enemata; and she was to have beef broth, porter, &c., daily, at proper intervals.

Two days passed. All had been done according to directions. The catheter had been regularly used with variable success. Sometimes the husband was aware of the existence of an impediment to its introduction, and at others he was unable to discover anything of the kind.

The irritation of the urethra having been sufficiently lessened, I introduced as large a sponge tent as possible, and removed it at the expiration of three hours. The passage was then sufficiently dilated to permit the forefinger to enter readily into the bladder, and with its point the growth could be distinctly felt. A long narrow bladed forceps was passed in, and efforts made to grasp a portion of the tumor, with very indifferent success, however. I only succeeded in detaching small portions, and bringing them away between the blades. These attempts were attended with considerable hæmorrhage, and I finally desisted. In a short time, and while I was pondering upon the best course to adopt, the patient was seized with severe pain and vesical tenesmus, and made frantic efforts to urinate. I hastened to introduce the catheter, when I discovered a portion of the tumor showing itself at the orifice of the urethra. I at once grasped it with a pair of small placenta-forceps, and with a succession of swaying movements from side to side, drew it out about two inches. I then substituted my fingers for the instrument, and twisted the mass slowly, like a rope. The patient, although suffering the most acute pain, aided its expulsion by powerful bearing-down efforts. I succeeded, in this manner, in removing a portion of the growth eight inches in length, of the thickness of the thumb. Then it gave way, and the remaining portion receded into the bladder. I was much disappointed at this termination, as I had hoped to remove the entire mass at this time. Very little bleeding attended the operation, although a few clots of blood—the result, probably, of the attempts made an hour before with the forceps—escaped by the side of the tumor, as it was being withdrawn.

During the succeeding four or five days many pieces of the now disintegrated tumor came away. They varied very greatly in size, some being quite small—mere shreds, in fact—while others were an inch or more in length. The larger pieces moulded themselves, in their passage, to the size and shape of the urethral canal. Toward the last they became exceedingly offensive, as did also the urine, which was loaded with pus, blood, and numerous shreds. The larger pieces were taken care of and placed in alcohol, at my request. The smaller ones, and that part of the growth which was softened down and passed off with the urine, of course escaped. The amount preserved weighs eight and a half ounces, and forms a mass as large as the closed fist.

The general condition of the patient now rapidly improved, so that at the end of a fortnight she was able to walk about the house. Incontinence, however, had succeeded the retention, and this still remained. The urine, which was now quite normal in quality and amount, was passing away continually, much to the disgust and discomfort of the patient. The bladder had contracted adhesions with the surrounding viscera, and its walls, thickened and hardened by inflammatory deposits, could be distinctly felt, filling a space in the hypogastric region as large as that occupied by the gravid uterus at four months. It was thus prevented from being either a retaining or an expelling organ, and I had nothing better to suggest for the patient than the use of a urinal, which was procured for her, and which she wears with a good degree of comfort.

April 30th, I saw Mrs. K. again. She had then fully regained her general health. The incontinence was improving. In certain positions of the body she could retain the urine nearly an hour, and felt hopeful that she might get entirely well. The bladder appeared also to be regaining its power; for there were times when with one or two ounces of urine retained, she found herself able to expel it with a fair degree of force.

Submitted to microscopic examination, a section of the tumor presents the same fibrous and vascular appearances as are seen in the case of uterine fibroids; and, indeed, on comparing it with a specimen of the latter, the two, both in their general character and minute structure, appear to be identical.—*Chicago Medical Journal.*

Bibliographical Notices.

On Cholera and Choleraic Diarrhœa; their Nature, Cause and Treatment. Two Lectures, delivered at the Church Missionary College, Islington. By George Johnson, M.D. Lond., Professor of Medicine in King's College, London; Senior Physician of King's College Hospital; and Consulting Physician to the Church Missionary Society. London. 1870.

The author, in this pamphlet of 47 pages, recapitulates in brief, clear and somewhat popular form views which he has previously from time to time expressed: first, in some reports of cases; next in 1855, in a considerable volume "On Epidemic Diarrhœa and Cholera;" and again in 1866 in a smaller book called "Notes on Cholera," ably and favorably reviewed by Sir Thomas Watson in the *Saturday Review*, and disinterestedly supported by the *British Medical Journal*, Dr. Markham, Editor.

Dr. Johnson has pushed his views in the face of strong opposition, with a zeal which indicates a thorough belief in their correctness and consequent importance. They are, perhaps, sufficiently well known among us not to require repetition; a statement of the main points, however, will aid in keeping the identity of the author with his doctrines.

Cholera is a disease resulting from the presence in the body of a material poison, derived from filth, recognized only by the symptoms it produces, and resembling in its effects, *more than any other*, that which produces typhoid fever. The vomiting and purging are natural efforts to eliminate the poison. The collapse is the result of impeded or obstructed pulmonary circulation, the smaller vessels by contraction opposing the admission of the poisoned blood to the lungs. "In truth, as Sir Thomas Watson, in his review, remarks, 'this explanation derives strong confirmation, from the fact that it unlocks like the right key the whole of the pathological intricacies of the disease.'" Astringents and opiates oppose, cathartics and emetics favor the evacuation of the poison. "The rule in all cases is, *not to give the opiate until the morbid poison and its products have for the most part escaped; not to close the door until the enemy has been expelled.*" * * * * "*Opiates are useful to soothe the irritation after the evacuation of the bowel; they are useless and even dangerous when the blood is poisoned or the bowel filled with morbid secretions.*" * * * * "There is one symptom that especially forbids the use of opium, and that symptom is *cramps of the muscles.*" The condition of collapse is equally an indication of the circulation of the *materies morbi*, and forbids the use of opiates. Castor oil is the favorite cathartic.

For a proper elucidation of the theory, Dr. Johnson must be allowed to speak for himself. He claims unequalled results for the practice, but says it must be followed with full and persevering faith and with a judicious estimate of the demands of each case to be successful.

Medical and Surgical Journal.

BOSTON: THURSDAY, AUGUST 25, 1870.

ON CERTAIN CHOREIFORM MOVEMENTS OBSERVED IN EXPERIMENTS ON THE DOG.

AT a séance of the Academy of Sciences in Paris, held in May, the attention of the members was directed by MM. Legros and Onimus to researches which they had made, of an interesting character. In order to study the choreiform movements of the muscles and the variations which are noticed in their form and intensity, they made use of the *graphic method* of delineation; the tendon of a muscle being exposed and fastened by a thread to the lever of the registering instrument, which marked the movements on a revolving cylinder.

They have, in the first place, proved that the intensity of the choreiform movements increases proportionally to their frequency, and that each accession of the convulsion is followed by complete repose. The regularity of the markings and the rhythm of the contractions was found to be in no manner dependent on the action of the heart, the shock of each pulsation in this way being shown to have no direct influence on the nervous elements of the cord. But in taking simultaneously the tracing of the pulse and of the choreic movement, if in certain cases the two occurred at the same moment, there was noticed at that point a marked dissimilarity between the two.

It is well known that anæsthetics cause the cessation of choreic movements; after having injected 3·50 grammes of hydrate of chloral into the rectum of a dog, a series of tracings was obtained in which the gradual diminution of the movements was clearly observed; and, moreover, they disappeared entirely before the voluntary motions were suspended.

By compressing the brain, the choreic movements are not interfered with; but, on the other hand, on giving anæsthetics which have a special determination to the sensory portions of the cord, the motions are abolished, a fact which leads us to believe that these portions of the nervous system, or the nerves dependent on them, are the seat of the disease. Following out these researches, the vertebral canal has been opened, and, on touching the posterior columns, energetic contractions have been obtained; when the cord, exposed to the air, has become cold, the movements grow feeble; to reëstablish them it is necessary to warm the cord artificially.

Besides these experiments, MM. Legros and Onimus have divided the posterior roots of the cord; this experiment was also tried by M. Bert, and with the same result, that is the rhythmic movements did not disappear. In another dog, after having cut the spinal cord on the median line, a portion of the cornua and the posterior columns was excited: the rhythmic contractions became very feeble and, indeed, at some points seemed to have disappeared entirely; it was only by extensively wounding the posterior portion of the cord that the choreic movements were suspended.

It is, then, easy to show that the seat of chorea is in the nerve cells of the posterior cornua, or in the filaments which unite these to the motor cells. This opinion is confirmed by experiments by means of electricity. Induction currents directed to the choreic limb induce a tetanic contraction which abolishes entirely the rhythmic movements when the current is strong; with a very feeble current a certain degree of contraction is caused, which, without causing the movements to cease, modifies them and renders them feeble and irregular. Continued currents applied in the same regions give, in every case, a diminution of the intensity of the contractions.

Direct electrization of the spinal cord gives very interesting results. On dogs, in whom the cord was exposed and divided transversely in the upper portion, the experiment was first tried of using the direct continued current supplied by eight piles of Remak. The tracings obtained showed that, under the influence of an ascending current, the contractions increase in number and intensity, and that they continue longer; on the interruption of the current, the extent of the oscillations diminishes and they become more feeble than before electrization. On the contrary, the descending current, applied to the cord, induces more feeble contractions, which increase only on the removal of the application.

Especial importance is laid, by the experiments, on the direction of the current, and the observations made in these cases of chorea confirm all that has been observed on the subject; it is contrary to reason to attribute always to the contact of the positive or negative poles different physiological effects which one ought to ascribe to the direction of the current; it has been proved by repeating the experiment in another manner. The poles of the battery were applied, on the same dog, not only directly to the cord itself, but also to the extremities of the animal's body, and the modifications of the movements were the same as in the preceding experiment. In like manner, whenever the movements were at any time completely arrested, either under the influence of poisons or on account of the progressive feebleness of the animal, the rhythmic contractions could not at all times be excited by the ascending current. The section of the posterior columns did not interfere with the result of the experiment; nevertheless, it cannot be said that the excitement of the posterior roots does not have any influence on the intensity of the chorea, but the contrary; but although they modify this movement, they have no influence in its production.

If the posterior roots of the cord are excited mechanically or by induction currents, it is shown that, after the cessation of the excitement, the oscillations acquire a remarkable force. This experiment adds a new proof to the localization of chorea in the posterior cornua of the gray substance of the cord.

Injections of Warm Water into the Tunica Vaginalis in Hydrocele. By Prof. Albansee.—In the cure of hydrocele surgeons have, after the evacuation of the fluid, employed various means for the production of adhesive inflammation. The injection of iodine has long been used with good effect; but while some have sought for means of more active irritation, others, as Dr. Albansee, have employed methods more simple in their action. Prof. Albansee has studied the action of injections of air into the tunica vaginalis. Having employed them in twelve cases, he has not found any marked advantage.

In another series of experiments, he has used injections of water at a temperature of 40° to 45° centigrade (107° to 113° Fahr.). The phenomena which immediately follow the operation are a trifling feeling of burning in the part, a moderate inflammation with a new effusion of fluid, and a rapid absorption. The injection of warm water has been used with success in a hydrocele which had resisted the employment of iodine. In only one patient has a suppurative inflammation occurred, and this was very probably caused by an infiltration of the water into the subcutaneous tissue of the scrotum.

Case I.—Right hydrocele, of three years' duration, in a man 40 years of age. Puncture and injection of water at 45° cent.; retained for two minutes. There was a very limited suppuration of the subcutaneous tissue. Cured in twenty-three days.

Case II.—Patient 23 years of age. Right hydrocele of two years' standing. There had been two punctures, in the first of which iodine had been used, and, in the second, insufflation of air. A puncture was made and 300 grammes of water at 42° cent. injected. The sac of the hydrocele contained 3 decilitres (10 ounces) of an albuminous fluid. Cured in eight days.

Case III.—A man 55 years of age; left hydrocele of a year's duration. Cure in eight days.

Case IV.—Right hydrocele and left hydro-sarcocele of syphilitic origin. Cure equally rapid.

Case V.—Patient 56 years of age. Right hydrocele of five years, having already been treated by injection of iodine. The patient went away after the operation, and the result is unknown.

In three other cases a cure resulted without accident.

Dr. Albansee is induced by these cases to look favorably on the injections of warm water. They have certainly the merit of being more easy of application than the injections of iodine, but it may be questioned if they are, in all cases, equally reliable.—*Gazetta Clinica di Palermo*, No. 1, 1870.

On the Use of Raw Meat in Diarrhœa and Dyspepsia. By Robert Druitt,, M.R.C.P., &c.—I learned the use of raw meat as a remedy for diarrhœa, from the late estimable Professor Trousseau, during a visit paid to his clinique at the Hôpital des Enfans Malades in 1851. Since that time I have had abundant opportunities of proving its efficacy, and although I know that it is largely used by some physicians, it may not be unseasonable at the present time to call attention to it, and to encourage its more general use.

Let me begin with a few words on the mode of preparing it. The meat used may be either mutton or beef—say a tit-bit of the loin of mutton, or of the fillet or other tender part of beef. This must be submitted to a process either of pounding, or of scraping, so as to get out the red soft muscular substance, as free as possible from all fat and fibre. The muscular substance so prepared forms a soft pink pulp, and even a good-sized piece of raw meat seems to yield wonderfully little by comparison with the parts that are rejected. It must be a pulp, giving no feeling of resistance when squeezed between the fingers.

The modes of administration are many. It may be given by itself, and this way is best in the case of young children. Very young infants may suck it from the end of their nurse's finger, and most of them take it greedily enough in this way. Children who are older, say from 2 to 5, may swallow it if dusted over with white sugar. Older persons may take it conveniently if diffused through a little strong beef-tea. But there is another way for which I am indebted to a lady who has made very large use of this remedy in the case of her invalid daughters, and which is known amongst a pretty wide circle as *jellied chop*. This consists in diffusing the meat pulp through a stiff meat jelly, and allowing it to cool in a shape. This is eaten like a spice, and is very nice to any one whose prejudices are not aroused by the notion of rawness. Salt and other condiments may be added at discretion.

The cases in which raw meat has peculiar efficacy are those in which other food passes undigested, and adds to the irritation of bowels in a state of diarrhœa. It seems to furnish the most efficient kind of nutriment with least inconvenience from bulk or other quality, and to be digested and absorbed with as little fæcal residuum as possible. Still there must be something more about it than this; for the liquid essence of beef will not take its place, neither will cooked meat.

First amongst the cases in which it is useful may be mentioned any acute cases of infantile diarrhœa, especially the infantile "cholera" of summer. No matter what medicines and what other kind of food may be used, I believe raw meat to be in itself both a remedy for the diarrhœa and a nutriment that may keep the child alive till the disease passes off.

Secondly, in the chronic diarrhœas of children, arising from scanty food, or what comes to the same thing, food which cannot be digested, and which consequently passes the bowels as a foreign offending substance, here the raw meat acts as food and medicine.

In the habitual diarrhœa associated with "marasmus"—that is, with the superficial ulceration of the intestinal mucous membrane, and enlarged mesenteric glands of strumous children—the raw meat, especially in the form of the "jellied chop," is of most especial service. It is curious to see in cases of this sort how absolutely the stomach sometimes refuses to act upon the food put into it, so that meat, milk, &c., may be recognized unaltered in the fæces. It is just in these cases that the raw meat showed itself susceptible of quick digestion in the stomach. The cases which the ancients called *lienteria*, or *intestinorum lævitas*, and which were designated in England in the last century "lubricity of the intestines," in which the stomach and bowels are so irritable that they pass on and eject the food before it has had time to be dissolved and absorbed—are equally benefited by the use of raw meat.

Lastly, there are the cases of the obstinate vomiting of pregnancy, whether attended with diarrhœa or not. This is a kind of a case in which no remedy is unwelcome or superfluous. I cannot take to myself the credit of suggesting it, for the mother of a young pregnant lady who was in imminent danger of exhaustion from vomiting had witnessed the good effects of this food in the case of another daughter who died of ulceration of the intestines, and gave it of her own accord. But I can bear testimony to the fact that the raw meat was taken readily and kept down when almost every other food was loathed and vomited, and I consider the patient's safety largely due to it.

There are other cases of atrophy, dyspepsia, and malnutrition in which I have found it useful. I should like also to say a few words on some other uses of meat, cooked as well as raw; but at present I wish mainly to call the attention of my medical brethren to its efficacy in diarrhœa, which may be expected to be the cause of an abundant mortality of infants during the next two months.—*London Medical Times and Gazette*, July 2, 1870.

Diagnosis of Renal Disease from Blood-corpuscles in the Urine.—Dr. Joseph G. Richardson, Microscopist to the Pennsylvania Hospital, Philadelphia, has applied to the elucidation of the condition of the kidney in renal disease the well-known views of Cohnheim, regarding the relation of the white blood-corpuscles to the inflammatory process. If both red and white corpuscles are present in the urine, and if it can be ascertained that their occurrence is independent of vesical irritation, the following indication may be derived from their relative proportion.

When the red corpuscles greatly exceed the white in number, true hæmorrhage has taken place from the kidney. This conclusion will be strengthened if no tube-casts be found, and the albumen be present in such quantity as will correspond to the amount of corpuscles, supposing both to be furnished by the liquor sanguinis.

When the white corpuscles are more than one twenty-fifth of the red, there is inflammation of the kidney of either an acute or subacute kind, and the danger will be found to be in direct proportion to the total amount of corpuscles.

When few or no red corpuscles are found to be mixed with the white, chronic inflammation is present, and is proportionate in extent to the number of blood-corpuscles.

In cases of acute Bright's disease, passing into the stage of fatty degeneration, the appearance in the urine of epithelium containing oil globules, points to the change from the stage of inflammation, and these epithelial cells will be found, according to the author, to vary inversely with the number of white corpuscles present, the albumen remaining the same in amount.—*Baltimore Medical Journal.*

Chloroform in the Treatment of Biliary Calculi. By John Barclay, M.D., Physician to the Infirmary, Leicester.—Seeing some reference in a contemporary periodical to the proposed use of chloral as a solvent of biliary calculi, I crave space to state that I have met with very great success from the internal administration of chloroform in that disease.

I first used it in 1861, in the case of a clergyman, aged 58. He had suffered for twenty-three years from gall-stones; the peculiar pain, jaundice, with subsequent discharge, by stool, of the calculi, coming on so suddenly and without warning, as seriously and frequently to interfere with his duties. Just then, writing on alcohol, I had been studying the experiments of Lallemand and others on the existence of alcohol unchanged in the blood. Knowing that ethers are solvents of cholesterine, I ventured, on his third attack in that year, to prescribe chloroform in doses of two or three drops, three or four times a day, on the chance of its reaching the calculi through the blood. To his surprise and my gratification, pain, tenderness, distention and jaundice disappeared together, and in the eight years since elapsed he has never had another attack. He keeps a bottle of "chloric ether" by him, for occasional use. I have found it to give invariable and permanent relief in many instances since.

The theory of thus dissolving the calculi *in situ*, followed by the disappearance of the symptoms, leads to a deduction that may be legitimate, that relief was obtained by their being so dissolved.—*British Medical Journal.*

On the Solubility of some Chemicals in Glycerin. By Klever.—The author found that 100 parts glycerin dissolve the annexed quantities of the following chemicals:—

Acid. arseniosum,	20	Morphia,	0.45
" arsenicum,	20	Morph. acetas,	20
" benzoicum,	10	" murias,	20
" boracicum,	10	Phosphorus,	0.20
" oxalicum,	15	Plumbi acetas,	20
" tannicum,	50	Potassæ arsenias,	50
Alumen,	40	" chloras,	3.50
Ammon. carb.,	20	Potassii bromid.,	25
" murias,	10	" cyanid.,	32
Antimonii et potas.		" iodid.,	40
tart.	5.50	Quinia,	0.50
Atropia,	3	Quiniæ tannas.,	0.25
Atrop., sulph.,	33	Sodæ arsenias,	50
Barii chlorid.,	10	" bicarbon.,	8
Brucia,	2.25	" boras,	60
Calcii sulphid.,	5	" carbonas,	98
Cinchonia,	0.50	" chloras,	20
Cinchon. sulph.,	6.70	Sulphur,	0.10
Cupri acetas,	10	Strychnia,	0.25
" sulph.,	30	Strychn. nitras,	4
Ferri et potass. tart.,	8	" sulphas,	22.50
" lactas,	16	Urea,	50
" sulphas,	25	Veratria,	1
Hydrarg. chlor. corr.,	7.50	Zinci chlorid.,	50
" cyanid.,	27	" iodid.,	40
Iodinium,	1.90	" sulphas,	35

—*Neues Jahrb. f. Pharm.*, 1869, from *Pharm. Zeitsch. f. Russl.*

The Cause of Summer Cholera.—C. F. Buckley, M.D., of San Francisco, Cal. (*California Medical Gazette*), in a recent paper before the San Francisco Medical Society, after dividing diarrhœa into six different varieties, adds a seventh, viz., summer cholera. He rejects the idea that fruit is the general cause of summer cholera, and is inclined to think it is due to an undue elevation of temperature; he also believes the affection is merely a modification, in a milder degree, of insolation or sunstroke. With undue elevation of temperature in the first place, the branches of the hepatic artery become expanded, causing more or less obstruction to the portal circulation; secondly, the smaller branches of the mesenteric arteries enlarge, causing more or less obstruction in the villous circulation. It is quite clear that a continuation of both causes will produce very extensive congestion of the intestinal capillary circulation, and so leads ultimately to diarrhœa.

In concluding, he advocates the "castor-oil treatment," which, in Asiatic cholera, yielded more favorable results in the vast majority of cases, in the institution with which he was connected, than any other remedy. The castor-oil should be combined with mucilage and chloric ether.

He has never tried cooling draughts, but intends to do so at the earliest opportunity.—*N. Y. Medical Record.*

The Stetho-Sphygmograph. By T. Hawksley, M.D., M.R.C.P.—At a meeting of the Medical Society of London, on Nov. 8th, Dr. Hawksley read a paper on the "Stetho-Sphygmograph," as an aid to the physiological and pathological investigation of the functions of respiration and circulation. He exhibited the practical application of the instrument on a case of phthisis pulmonalis, and one of well-marked mitral regurgitation. In every case three simultaneous and synchronous tracings of moving organs are taken—as, for example, the two lungs and the radial pulse; or the heart, the radial pulse, the carotid or the femoral. It was shown that the tracings would show any disparity in the action of the two lungs, also the relation of inspiration to expiration; and, associated with the pulse tracing, it afforded the opportunity of observing, not only the peculiarities or modifications of the circulation, as in the case of Marey's sphygmograph, but in addition, their relation to the respiratory process. By aid of this instrument, any question as to relative time in the transmission of the blood-wave through the arteries may be solved; as, for example, the time occupied in transmission to the radial, the carotid, or the femoral artery. This may be found to have important connection with the diagnosis of aneurisms and tumors, as well as with diseased states of the arteries with chronic diseases of organs.—*Lond. Lancet.*

Reproductions of Limbs.—M. Phileppeaux has proved for fish what he had already demonstrated in the case of newts, viz., that when the limb is removed below the scapula or ilium it is reproduced. But when the scapula or ilium is removed no reproduction takes place.—*Monthly Microscopical Journal.*

Medical Miscellany.

Production of Bone from Medulla.—An interesting "provisional communication" appears in No. 24 of the *Centralblatt*, from the pen of M. Baikow, on the effects of transplantation of medulla. M. Baikow made two series of experiments. In one set, which were thirty-eight in number, the medulla from the femur or tibia of a dog was placed under the skin of the back of another dog; whilst in a second set, twenty-eight in number, the marrow was inserted beneath the skin of the back of the same individual. The first set of experiments all failed; bone was formed in none. In the second set fourteen cases succeeded—i. e., bone was actually formed; whilst in the remaining six cases the changes that occurred in the early stages were followed. The remaining eight cases were unsuccessful. In the fourteen successful cases bony masses were found in various stages of development, from the earliest rudiments to complete formation, with Haversian canals, lamellæ, stellate lacunæ, and medullary cavities filled with medulla. Up to the present time, M. Baikow's experiments extend only to the seventy-sixth day. In one case, at the sixty-first day, not only was complete bone present, but fibro-cartilage. The results of examinations showed that the medulla, after transplantation, first passed into the condition of fibrous tissue, from which by the proliferation of the cellular elements, bone or cartilage was developed. M. Baikow's results are in opposition to those of M. Ollier, but corroborate those of M. Goujon.—*Lancet.*

A New Vesicant.—In a recent number of the *Journal de Chimie Médicale*, M. Delpech calls attention to the defects of the ordinary preparations of cantharides; the proportion of the active agent, or cantharidin, varying, the presence of fatty or oily substances sometimes causing the absorption of a dangerous poison, and the rosin or turpentine employed in the composition of the plaster being an unnecessary irritant. In place of this, he recommends the cantharidinate of potash, which is of a very stable composition, has no odor, and possesses a vesicant action in a high degree. He recommends as the best formula for the plaster:—Gelatin, 2·09 parts; water, 10 parts; alcohol, 10 parts; cantharidinate of potash, 0·20 part; glycerine, 9·5 parts. The mass should be equally spread on thin gutta percha, a definite quantity being present in each square inch.—*Ibid.*

Abernethy's Dislike to Unnecessary Talk.—People who came to consult this eccentric man took care not to offend him by bootless prating. A lady on one occasion entered his consulting room, and put before him an injured finger, without saying a word. In silence Abernethy dressed the wound, when instantly and silently the lady put the usual fee on the table and retired. In a few days she called again, and offered her finger for inspection. "Better?" asked the surgeon. "Better," answered the lady, speaking to him for the first time. Not another word followed during the rest of the interview. Three or four similar visits were made, at the last of which the patient held out her finger free from bandages and perfectly healed. "Well?" was Abernethy's monosyllabic inquiry. "Well," was the lady's equally brief answer. "Upon my soul, madam," exclaimed the delighted surgeon, "*you are the most rational woman I ever met with.*"—*Jeaffreson's Book about Doctors.*

To Correspondents.—Communication accepted:—Cases of Zoster.

Pamphlets Received.—Reform. Medicine and Morals. No. 3. An Address delivered before the Onondaga Med. Society, at Syracuse, N. Y., June 14, 1870, by J. A. Mowris, M.D.—Man's Power over Nature, and Medicines as a Means by which he aids and controls the Laws of Life. An Address delivered before the Indiana State Medical Society, May 17, 1870, by George Sutton, M.D., Aurora, Ind.—Transactions of the Indiana State Medical Society, 1870. Pp. 164.—On the Origin of Diabetes, with some New Experiments regarding the Glycogenic Function of the Liver. By W. T. Lusk, M.D., Professor of Physiology, Long Island Medical College. Pp. 19.—Eighteenth Annual Report of the Trustees of the Boston Public Library, 1870. Pp. 64.

Died,—At Burlington, Vt., August 16, Dr. Leonard Marsh, an old resident of that city, and for fifteen years a Professor in the University of Vermont.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending Aug. 20, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases		
		Cholera Infantum.	Consumption.	Dysentery & diarrhœa.
Boston	161	36	20	23
Charlestown	21	5	2	5
Worcester	22	4	2	1
Lowell	27	6	7	2
Chelsea	6	0	1	0
Cambridge	29	11	4	0
Salem	9	3	0	1
Lawrence	11	1	2	0
Springfield	2	1	0	0
Lynn	18	3	4	1
Pittsfield	1	0	0	0
Gloucester	15	0	2	0
Fitchburg	6	1	0	1
Newburyport	1	0	0	0
Somerville	11	3	2	1
Fall River	15	4	4	1
Haverhill	7	1	3	0
	361	81	53	36

From all the above places there are reported twelve deaths from typhoid fever and nine from whooping cough.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Aug. 20th, 161. Males, 80; females, 81. Accident, 2—anæmia, 1—apoplexy, 2—asthma, 1—disease of the bowels, 3—congestion of the brain, 2—disease of the brain, 4—bronchitis, 3—cancer, 2—cholera infantum, 38—cholera morbus, 1—colic, 1—consumption, 20—convulsions, 1—croup, 2—cyanosis, 1—debility, 2—diarrhœa, 12—dropsy, 2—dropsy of the brain, 2—drowned, 2—dysentery, 11—scarlet fever, 1—typhoid fever, 6—disease of the heart, 3—infantile disease, 6—intemperance, 2—disease of the kidneys, 1—congestion of the lungs, 1—inflammation of the lungs, 5—marasmus, 7—old age, 3—premature birth, 2—puerperal disease, 1—rheumatism, 1—scrofula. 1—stone (in the bladder), 1—trismus neonatorum, 1—unknown, 3—whooping cough, 1.

Under 5 years of age, 93—between 5 and 20 years, 7—between 20 and 40 years, 19—between 40 and 60 years, 23—above 60 years, 19. Born in the United States, 123—Ireland, 26—other places, 12.

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Original Communications.

APHASIA, AND THE PHYSIOLOGY OF SPEECH.

By T. W. Fisher, M.D., Boston.

Part I.—Aphasia.

For the sake of a definite line of reading, the writer selected the above subject a few months ago, and has jotted down in the course of study such facts and theories as seemed to have the most importance, without regard to their novelty, and with no attempt to separate the well known and common place from those more new and startling. The desire was not to throw new light on the subject, but to collect enough of the scattered rays existing to illuminate the obscure relations of the faculty of speech to the other cerebral functions.

Historical Survey.—The literature of aphasia has assumed such proportions during the last ten years as to render it difficult to select such facts as shall best represent its growth. The symptom, aphasia, has from the first been swallowed up in discussion concerning the location of the faculty of speech, and this discussion is decidedly of French origin. It seems imperative, therefore, to present an outline of it here, however frequently it has been summarized before, since it is the French root, stimulated by French enthusiasm, which has produced such luxuriant foliage. The little fruit which has yet ripened is not quite of the expected variety. The following facts are collated from French authorities.

Cases which would now be called aphasia were recorded by ancient writers, but excited little intelligent interest till the present century. Cullen and Sauvages, as Trousseau says, wrote many deplorable things on *alalia*. Towards the close of the last century, J. P. Frank distinguished various kinds of alalia from aphonia, but attributed the aphasic symptoms to partial paralysis of the tongue. Joseph Frank also failed to perceive the higher sources of loss of speech, and sought the lesion in the medulla, at the roots of the glosso-pharyngeal and hypo-glossal nerves.

In 1810, Gall commenced the publication of his great work devoted to the localization of the mental faculties. By conjecture, based on his early observations of the prominence of the eyes (yeux déprimés) in persons whose power of memorizing words was great, he placed the faculty of language in the anterior lobes. He also supported this view by two cases of loss of speech—one reported by Pinel and one by Baron Larrey.

According to Bouillaud, Gall did not distinguish clearly between the faculty of language on its mental side and the power of coördinating the movements necessary to articulate speech. This distinction he himself made in a memoir read to the Academy in 1825 (Traité de l'Encéphalite). In this paper he affirmed that the centre of coördination for speech was in the anterior lobes. In 1839, he supported his views with new facts and arguments, and once more in 1848. He claims at this time to have found no evidence opposed to his theory of location, in seven or eight hundred cases collected by him. He even offered a reward of five hundred francs for a single case of extensive disease of the anterior lobes without impairment of speech. In the discussion of 1865, he denied that any such case had been presented. He had, however, previously attached to his offer the difficult condition that he should have an opportunity to see the patient, living, and the brain after death, in order to personally verify all the facts in the case. This want of confidence on the part of M. Bouillaud in his *confrères* may well excuse an occasional lack of it in strangers.

In 1820, Lordat, who became aphasic himself eight years after, ascribed the affection, which he called alalia, to defect of the centres of coördination used in speech. After his recovery, he stated that he was conscious of no impediment to thought, but could neither express his ideas by written nor by spoken words. He argued from his own case that words were not necessary to thought.

In 1836, Dr. Marc Dax, in an essay entitled "Lesions de la moitie gauche de l'encéphale coincidant avec l'oubli des signes de la penseé," stated that as far back as 1800 he had noticed the frequent concurrence of loss of speech and right hemiplegia. His essay was republished in 1865, and was referred to a committee whose report furnished the basis of the famous discussion at the Academy of Medecine in Paris. (*Gaz. Hebdom.*, Paris, 1865, Avril, No. 17, p. 259.) In 1863, Dr. G. Dax, in a paper read before the Academy, had endeavored to show that not only was the lesion in aphasia invariably seated in the left hemisphere, as his father had shown, but in the anterior and outer portion of the middle lobe of it.

In 1856, Dr. Marcé endeavored to show a distinction between the coördinating centres for speech and writing, but did not attempt to locate either. (Mem. Soc. Biolog., 1856.)

In 1861, a discussion arose in the Société Anthropologique upon the localization of the cerebral functions. Dr. Gratiolet asserted that such attempts had been heretofore failures. Dr. Auburtin cited cases to show that the anterior lobes of the brain were the seat of the coördinative power necessary to speech. M. Broca, though at first sceptical, in consequence of two striking cases of aphasia which opportunely occurred, became one of the strongest partizans of the localization theory. He not only placed the lesion in aphasia in the left anterior lobe, but believed he had found the seat of the faculty of *articulate language* in the *posterior third of the third left frontal convolution.* His two cases were first published in August and November, 1861. (Sur le Siége de la Faculté du Language Articulé. Bul. de la Soc. Anat., Paris, 1861.)

In consequence of this bold theory of M. Broca, observations of the lesions in aphasia became more frequent and exact. Clinical observations, with and without autopsies, were reported by Drs. Charcot, Vulpian, Parrot and Fernet. Trousseau was at this time collecting the many admirably described cases which form the ground work of his amnesic theory of aphasia. Dr. J. Hughlings Jackson was investigating the causes of aphasia, and, in 1864, published a most suggestive paper on the "Loss of Speech; its Association with Valvular Disease of the Heart and with Hemplegia of the Right Side." (London Hospital Reports, vol. i.)

In April, 1865, commenced a long and interesting discussion upon aphasia in the Academy of Medicine. In December, 1864, M. Lelut, one of a committee consisting of Messrs. Bouillaud, Béclard and Lelut, to whom had been referred the paper of Dr. M. Dax, had made a minority report. In it he briefly disavowed the whole theory of localization, and classed all attempts at locating the faculty of speech as unscientific and phrenological. The following April, M. Bouillaud presented a majority report, reviewing the subject at length and criticizing M. Lelut severely. He defended the doctrines of Gall in general, and confirmed his location of the sexual faculty in the cerebellum and of the faculty of speech in the anterior lobes. Trousseau followed in a critical analysis of some new cases of his own, and summarized the observations recorded up to that time in an able and eloquent manner. He presented and argued at length his theory of amnesia, or loss of memory, as the cause of aphasia.

The discussion was continued for several weeks, and was participated in by Messrs. Parchappe, Briquet, Bouillaud, Piorry, Baillarger, Bonnafont and Cerise. Messrs. Parchappe, Baillarger and Cerise, physicians to hospitals for the insane, opposed the theory of local faculties, strongly maintaining the unity of mind. Fournie (Physiologie de la Voix et la Parole, Paris, 1866) and Vulpian (Leçons de Physiologie du Systéme Nerveux, Paris, 1866) also rejected this theory.

Since 1865, the literature upon this subject has been constantly extending in scope and interest, and English authors have continued the investigations inaugurated by the French savans. The prominent papers on aphasia, and the questions suggested by its phenomena, are as follows:—Dr. Gairdner, On the Function of Articulate Speech, Glasgow, 1865; Dr. Banks, a paper in the Dublin Quarterly Journal of Mental Science, February, 1865; Dr. Wm. Ogle, Aphasia and Agraphia, St. George's Hospital Reports, 1866; Dr. Moxon's theory of the One-sided Lesion in Aphasia, British and Foreign Review, April, 1866; Dr. Wilks on Nervous Diseases, Guy's Hospital Reports, 1866; Dr. Popham on Aphasia, Dublin Journal of Mental Science, Aug., 1867; Dr. Robertson, in the British Journal of Mental Science, Jan., 1867; Dr. Hughes Bennet, read before the British Medical

Association at Norwich, 1868; Dr. J. W. Ogle, thirty cases of Defective Speech, with Disease of the right Side of the Brain, Lancet, 1868, vol. i. p. 371, vol. ii. p. 111; Maudsley concerning Aphasia, Lancet, Nov. 28th and Dec. 5th, 1868; H. Charlton Bastian, M.D., On the various Forms of Loss of Speech in Cerebral Diseases, in the British and Foreign Review, Jan., 1869, p. 209, to April, p. 470; Dr. Carnley, Medical Times and Gazette, Feb. 13th, 1869; and Dr. Bateman, in the British Journal of Mental Science, 1868 and 1869, and in the Lancet, Feb. 13th, 1869.

The principal papers by American observers which have come to my notice are the following:—Dr. Austin Flint, Sr., Cases in the N. Y. Medical Record, No. 1; Dr. Richardson, in the Buffalo Medical Journal, quoted in the Richmond Medical Journal, May, 1867; Dr. Wilbur, of Syracuse, in the American Journal of Insanity, July, 1867; On Aphasia as illustrated by Congenital Defect, Dr. Seguin, late Resident Physician of the New York Hospital; A Statement of the Aphasia Question, with a report of fifty cases, Quar. Jour. of Psychological Science, vol. ii., Jan., 1868; Dr. Edes, a fully reported case, with an autopsy and microscopical examination, Boston Med. and Surg. Journal, Feb. 6th, 1868; and Dr. Bartholow, Jour. of Mental Science, April, 1868.

Dr. Niemeyer has reported a case of aphasia, with remarks, which may be found in the Times and Gazette, Jan., 1870. The recent contributions of German writers may be found in Dr. Bateman's paper, in brief (Jour. of Mental Science, Jan. and April, 1868).

Aphasia.—The term *aphasia* was first adopted by Trousseau. The old term, *alalia*, included, as he says, "a monstrous assemblage of contradictory phenomena," and was entirely inappropriate to the symptoms he wished to include. *Aphemia*, besides having a double signification, was not comprehensive enough, having been applied by Broca to the loss of articulate language alone. The adoption of a name would seem to imply the duty of definition. This Trousseau gave, in spite of his attempted refusal. He makes aphasia include, in varying proportions, the loss of memory, or amnesia of speech, writing and gesture. "Aphasia," he says, "consists in a loss of memory for words, in a greater or less degree; of the memory of acts by which words are articulated; and of intelligence." (Clinical Medicine, vol. i. p. 273.) He rejects such cases of defective speech or expression as depend on the paralysis of the organs involved, without loss of memory or of coördinating power.

Since the name and definition are Trousseau's, we will select one of his cases by way of illustration. It is translated and slightly abbreviated from the Bulletin de l'Académie de Médecine (vol. 30, p. 650). "A poor workman, who had been educated at a seminary for the priesthood, and whose mind was therefore somewhat cultivated, was seized with apoplexy after a debauch. There was paralysis of the right side, and from the moment of the attack he could only say, *cousisi*. When irritated by questions, he would sometimes cry out *Saccou!* with the evident intonation of an oath. When nearly well of his paralysis, I tried to teach him to write. He wrote his name, *Pacquet*, correctly, but when asked to write the name of his wife, *Julie*, he still wrote *Pacquet*. The name of the month was also *Pacquet*. This was the extent of his ability in writing. When asked to make the gesture of a man playing the clarionet, he made that of a man who beats a drum. When shown how to blow a clarionet, he imitated the motions clumsily; but when asked to beat the drum, he hesitated a moment, and then went on blowing the clarionet. Here, then, was a man of cultivation prevented from manifesting his thoughts either by speech, writing or gesture."

To complete the illustration, it is necessary to observe that the mind was impaired in this case. The attention was feeble and the memory badly defective. It is to this defect of memory that Trousseau attributes the symptoms in aphasia. The defect, according to his definition, should implicate not only those nerve cells which serve as a storehouse for words, but those which preside over the coördination of the movements necessary to speech. The above case is, I think, quite a typical one, according to Trousseau's definition. His eloquent peroration before the Academy will develope still further his idea of aphasia. "The aphasic person, gentlemen, has become almost a child, with this difference only, that he has almost entirely forgotten what the child has never learned. The brain of the child is a field upon which the plough does not trace in vain its fertilizing furrow; the brain of the aphasic is the sea, where the prow of the ship leaves no trace."

Aphemia.—M. Broca uses the term *aphemia* in a more restricted sense than aphasia implies. The following is from his *Mémoir sur le Siége de la Faculté du Language Ar-*

ticulé :—"The abolition of speech in persons who are neither paralyzed nor demented, constitutes a symptom so singular that it appears to me useful to designate it under a special name. I will give it, then, the name of *aphemia*, for what these patients lack is simply the faculty of articulating words. They hear and understand all which is said to them; they emit vocal sounds with ease, and execute with their tongues and lips movements much more extensive and energetic than those required for the articulation of sounds."

The two cases to which M. Broca owed his conversion do not seem to have been purely aphemic. In the first, the patient could neither speak nor write. In the second, the one in which the lesion was so exactly limited to the second and third left frontal convolutions, the patient could not guide his hand to form letters, as M. Broca himself admits. He used, however, a very expressive pantomime, and seemed to understand all which was said to him. M. Broca therefore assumes that the general faculty of language was unimpaired. Since cases of pure aphemia are very rare, the advocates of M. Broca's theory have in most instances been obliged to assume a connection between the loss of articulate speech and lesion of the third left frontal convolution, in presence of many other symptoms and of more varied and extensive lesions.

It is necessary to admit the existence of aphemia in a few well-observed instances. Trousseau mentions two or three only: one of a porter who could not speak a word, but who wrote a clear account of his attack; another of a gentleman who was speechless, but who gave orders and kept up a correspondence in writing. A still more remarkable case was that of a merchant of Valenciennes, who could write, but who was unable to read aloud what he had just written. (Bul. de l'Acad., 1865, vol. 30, p. 651.) Here the power of thought and of expression by writing remained, but, aphemia existing, the words just written could excite no audible response.

Forbes Winslow, out of twenty or more cases of defective speech, gives but one which can be considered pure aphemia. (Dis. of Brain and Mind, p. 495.) Of thirty-four cases reported by Dr. J. Hughlings Jackson, there is not one of aphemia. (Lond. Hospital Reports, vol. i.) Of the twenty-eight cases related by Trousseau in his Clinical Medicine, in fourteen the general faculty of language was impaired or destroyed. In thirteen the loss of the power of writing is not mentioned, but may be fairly inferred in some of them, while in others there was paralysis of the right hand, or inability to write when well. The only remaining case is that of M. Broca, which, we have seen, was defective as an example of aphemia. Of some thirty cases adduced on both sides, during the discussion at the Academy, but four were cases of aphemia. Two of these have been mentioned above, and were presented by Trousseau, the other two being offered by M. Bouillaud.

It was conceded then, by both parties, that aphemia, pure and simple, might exist; but our figures show out of a hundred or more cases of aphasia but five in which the faculty of writing persisted. In most cases of aphasia a certain degree of facility of expression by gesture remains, and is often the only guide in estimating the state of the intelligence. The power of designing, of calculation, of composing, playing, and singing music, or of playing games, may be affected or remain intact. All such cases, more or less complex, in which loss of speech is the chief symptom, M. Bouillaud considers as cases of aphemia, with additional symptoms which may or may not be present.

I have been unable to gather any cases in which these secondary symptoms have existed independently of affections of speech. A few cases of so-called *agraphia* are on record, but the inability to write has always been accompanied or preceded by some aphemic defect. As at present generally understood, aphasia includes both aphemic and agraphic defects in varying proportions, and, as we shall soon show, due sometimes to an impaired memory, sometimes to faults of coördination, and sometimes to both.

Amnesic and Ataxic Aphasia.—Using the term aphasia to cover that assemblage of symptoms most common in cases of loss of speech, not depending on paralysis or dementia, let us consider the distinction between the mental and motor side of such cases. Are the functions called memory and coördination lost independently of each other? It is evident Trousseau has viewed his cases particularly in their mental aspect. He argues at length the probable impairment of intellect in all of them. He thinks Lordat was deceived in his estimate of his own mental power while aphasic. He makes loss of memory for words the chief symptom, and styles loss of coördinating power the loss of memory for acts by which words are articulated.

His definition admits the existence of

ataxic symptoms to some extent in all cases, but he attributes them to amnesia. The idea of the act by which a word is pronounced exists in the mind only in gross, there being no consciousness or memory of individual muscular actions. We can only will the result of certain combined actions which follow spontaneously. In fact, so automatic does speech become that the adult is seldom conscious of this act of will, unless special attention is given to it. We are, therefore, unconscious, and do not remember the acts by which words are performed. It would be difficult for any but a teacher of elocution, or articulation, to recall or describe such acts without at the same moment performing them by way of reminder.

With proper deference, I would suggest that when memory, in the ordinary sense, takes no part in an act, the loss of power to perform such an act should not be set down to loss of memory. It seems like a forcible perversion of language, for the sake of adapting facts to a theory, to speak of mental and motor symptoms as alike due to loss of memory. If by memory is meant the unconscious power of retaining and reproducing impressions which the nerve cell possesses wherever found, then paralysis may be styled a loss of memory. The term was evidently used in its ordinary sense as applied to words ; and if so, it was illogical to use it in a different sense when applied to the acts by which words are performed.

M. Bouillaud, in 1825, distinguishes between the mental and motor aspect of speech, and in 1865 opposed the amnesic theory of Trousseau. M. Broca says, in relation to aphemia:—" One can make, then, two hypotheses on the nature of the special faculty of articulate language. In the first it will be a superior faculty, and aphemia will be an intellectual disorder. In the second it will be a faculty of an order much less elevated, and aphemia will be only a disorder of locomotion."

The integrity of the faculty of language, on its mental side, can only be determined by spoken or written words, by acts performed in response to the requests of others, or by the subsequent testimony of the patient. As the first two modes of expression are absent and the third usually much impaired in aphasia, the evidence is necessarily limited. The best test of such integrity is furnished in those few cases where the lesion has spared the power of writing. Since the written corresponds exactly to the spoken word, and it is unnecessary to suppose duplicate word-centres superintending the two methods of expression, the facility of expression by writing must be an index to the condition of the intellectual word-centre. In other terms, when the faculty of speech on its mental side is at fault, the written and spoken word will be equally affected. If the coördinating power alone is impaired, articulate speech may be affected independently of the power of writing.

It may be objected that the patient, in the case selected from Trousseau, could only say *cousisi*, and could only write *Pacquet.* Being a well-marked case of amnesic aphasia, the power both of speaking and writing was nearly lost, but the want of identity in the written and spoken words remaining may be attributed to lesion of the fibres conveying voluntary impulses. Aphasia is seldom purely amnesic or purely ataxic, but partakes of both characters, or leans more or less decidedly to one or the other form, with a varying amount of impairment of voluntary transmission.

A case or two of incomplete aphasia, coming under my own observation, may prove better by way of illustration than others in which the entire loss of speech prevented all knowledge of the subjective phenomena.

A man, aged 60, of eccentric habits and insane tendencies, became more and more irascible and suspicious, giving way at last to horrible delusions respecting the conduct of his children. While denouncing them to his brother, he was seized with an attack of apoplexy, the more prominent effects of which were transitory. He retained his delusions, however, and also firmly believed that at the moment of the attack his brother had struck him. When I first saw him, there existed a defect of speech, which his friends referred to the apoplectic seizure. There was no labial nor lingual paralysis, and his articulation was perfectly distinct. There was a great defect in his expression of ideas which resembled incoherence, but seemed due to loss of memory. Substantives were remembered with difficulty, and pronouns were badly misapplied. He made strange circumlocutions to express his ideas which seemed definite enough to his mind, although delusional to some extent. Only those constantly with him could unravel his meaning.

For instance, in asking for his shirt and drawers, he would say, " Give me them that were on my breast, and those that I wear on my legs." In alluding to his brother's death, he used the singular periphrase, "when he was about being got through with." He could write freely, but his expressions were of precisely the same character. For instance, in referring to his children's conduct and its effect on himself, he wrote:—"You will be guilty of the death, of the tears of those, and prayers of those, who have lived the life of an honest man. *I mean* J—— B——." As if, by a happy effort, he succeeded, in the last sentence, in making a clear statement of himself as the person referred to. His gestures were often expressive of anger or impatience, but gave little help in understanding his meaning beyond designating objects and directions.

This case shows a partial affection of the general faculty of language, on its mental side, occurring in a case of delusional insanity, in consequence of an apoplectic seizure. The loss of memory for substantives in this case was partial, but in a case reported by M. Piorry in 1826, and in others of more recent date, this loss has been quite complete. M. Piorry gave to this form of aphasia the term *amnemonomia*, and charges Trousseau with having stolen his theory and given a new name to the same disease.

A gentleman, formerly prominent in business and politics, presents the following permanent defects of speech, with hemiplegia of the right side. There is no lingual or labial paralysis discernible, and yet articulation is very clumsily performed. At times he pronounces a few sentences distinctly; at others his speech is a mere jumble of sounds. At times he can say "Hopkinton," which has become a sort of test word with him, quite well; at others it degenerates into something like "Blopsingson." He gets impatient when unable to make himself understood, and closes the conversation by saying quite distinctly, "I can't talk."

His expression is also defective for another reason. He retains his interest in politics, and often attempts to relate some incident in his experience, but usually forgets the names of persons and places important to his story. In such case he likewise gets impatient and says, "I can't memember." He also has the singular habit of saying "no" when he means "yes," and the opposite. He has not learned to write with his left hand, as he thinks it would be useless to try. He is aware of the double nature of his defective expression, and thinks the mental is nearly as bad as the motor difficulty. The want of coordination is, however, the most striking feature of the case. His intelligence is but little impaired, aside from loss of memory for names. There is less emotional disturbance than is often seen in cases of hemiplegia without aphasia.

The preceding cases were under the care of Dr. Walker, at the Boston Hospital for the Insane.

[To be continued.]

SIMPLE DRESSING BY CONTINUED MOISTURE.

By Dr. LEON LE FORT. Translated by FRANK W. DRAPER, M.D., Boston.

THE mortality after operations, higher in military than in civil practice, greater in the larger hospitals of cities than in the smaller country hospitals, more considerable in those of Paris than in those of London, depends especially on the more or less frequent development of two formidable complications, pyæmia and erysipelas. Sometimes, in some of our hospitals, these diseases become so grave and appear with such frequency that they may be characterized as an epidemic, so that, at such seasons, one can hardly make a simple incision without seeing erysipelas follow; while if operations of some magnitude are ventured upon, it is with dread of pyæmia.

Such a condition of things becomes a source of constant peril to our patients, but it is also of positive interest in the progress of science, unavoidably pre-occupied with the uncertainty of its results. Surgery in Paris is compelled to assume extreme caution, while elsewhere, surgical practice, without doubt occasionally rash, can proceed ordinarily to a degree of boldness excusable by the extreme rarity of those grave complications which are so frequent in the majority of our hospitals. When the diseases are seen to extend with all the characteristics of an epidemic, and when it is remarked, moreover, that these epidemics, like that of puerperal fever, are limited sometimes to one hospital, sometimes to another, and are confined to one series of patients without invading an adjacent number, it is hard not to confess that equally with puerperal fever, there exists an underlying cause for erysipelas and pyæmia, capable of producing these effects, and to be sought for in some other condition than the contagious or rather infectious character of accidental wounds, surgical or puerperal.

In order that such epidemics should develope, it is necessary that there should be one spontaneous case as the origin; they will therefore be rare in proportion as these single cases are rare; and they will be more infrequent still, if, when these original cases occur, the morbid receptivity of the influence of the poisonous germ is observed to diminish in other patients.

To diminish the frequency of these spontaneous cases, or to prevent the general spread of these diseases, if we cannot prevent their development in the single patient, is the problem. Independent of the constitutional conditions pertaining to race or previous habits of our patients, conditions which of course we cannot control, three elements combine to render these complications more or less frequent, viz.: the nursing, the diet, and the dressing employed.

The marked improvements introduced into our hospitals within the last ten years, the more general use of a regimen more largely restorative, and into which has gradually entered the use of tonics and stimulants, have changed our surgical results for the better. Hygiene and diet have a great influence on the more or less frequent spontaneous development of pyæmia, while the dressings used can prevent its spread; they can hinder not only the propagation, but even the inception of erysipelas.

If we can say "no epidemic without contagion," we can say with equal truth—no pyæmia, no surgical erysipelas, perhaps, indeed, no erysipelas at all, without a wound, either of the skin or the mucous membrane. So, although the notion of the contagiousness of these diseases is far from being accepted by all surgeons, all or nearly all will from observation agree that atmospheric air plays an important part in their propagation, whether the infectious properties be ascribed to the air itself, or be considered an element only in permitting or in producing the decomposition of pus and the formation of poisonous materials. Others, with equal truth, although led by other theories, have sought to prevent especially the absorption of the septic germs, by promoting the obliteration of the absorbed vessels, which exist at the surface of the wounds; this they attempt sometimes by modifying the methods of operating, sometimes by the use of astringent or caustic solutions as a dressing to the wound.

To substitute for the knife, which leaves the vascular openings patulous, some method producing instant obliteration of the vessels, has ever been the desideratum; it has been more or less realized by the use of the cautery in its different varieties; to which should be added the ligature, if it were not the same method used under another name and with less perfect means.

After having for a long time under the names digestives, maturatives, detersives, agglutinatives, resolvents, &c., multiplied the formulæ of ointments, surgeons have recently used hardly any except cerate; and this less to modify the condition of the wound than to prevent the dressings from sticking. Now, cerate has happily lost much of its old favor; abroad it has been almost wholly abandoned; and for my part, I have absolutely proscribed it, because as ordinarily used, a large share of the blame of traumatic erysipelas can be laid to its charge.

In a scientific spirit and with the hope and aim of reaching the original causes of erysipelas and especially of pyæmia, surgeons of the present generation, and many of our fathers, have originated and extolled various modes of surgical dressings. Although extremely diverse in the means employed, these methods all unite in the purpose to fulfil a common indication; and they can be classed in several distinct groups, of which we shall speak of the most important only, characterizing them according to their distinctive features.

To exclude the air was the object which M. Langier sought to accomplish by his "occlusive" dressing of gold-beater's skin. But this occlusion, although complete in wounds not long or deep, as in burns for example, is very imperfect, if indeed it is attained at all, when applied to amputations which are suppurating profusely. The application of the beater's skin prevents, moreover, the discharge of pus, and necessitates more or less frequently the perforation of the distended membrane. M. Chassaignac's dressing by occlusion prevented, in great measure, the contact of the air and allowed the escape of the discharges. But this dressing, excellent as it is when applied to old wounds whose granulations are well formed, has diachylon as its base; and I believe the use of this agent is sometimes accompanied with danger, when it is applied to recent wounds; and its employment has seemed quite often to be the source of erysipelas.

If M. Chassaignac seeks by his dressing to favor the escape of pus, at least he does not consider the contact of laudable pus with the wound a source of danger. To prevent the decomposition of pus, and to remove it entirely as fast as it is formed, meanwhile excluding the air, is the object proposed in M. Jules Guerin's apparatus for continued exhaustion. This method is capable of giving excellent results in amputations, and it fulfils also an important indication we shall revert to hereafter, but the complicated apparatus and the difficulty of its adjustment are not unimportant objections.

Messrs. Mayor of Lausanne, Langenbeck and Valette of Lyons, have proposed to exclude the air, and to dissolve the pus as fast as it forms by placing the stump in a continued warm bath. This plan, belonging especially to the Berlin professor, has given only unfavorable results at Paris; it is true the apparatus employed, very different as it was from that used in Germany, contributed much towards its failure, by tending to arrest the circulation in the stump by the compression at its base of an elastic band. This treatment has given, when properly applied, good results in amputations of the leg and forearm, but it is of very different adaptation to amputation of the thigh. The necessity of maintaining a uniform temperature in the bath and the need of special apparatus have done much to prevent its general use.

Treatment by baths of carbonic acid and of oxygen have been wholly abandoned.

The instantaneous occlusion of the vessels has been attempted by the use of dressings with certain agents which, like concentrated perchloride of iron, form a superficial eschar on the bleeding surfaces, or like alcohol, or diluted perchloride of iron, coagulate the albumen and aid in the formation of a clot at the mouths of the vessels. This method, in great favor for some years, is allied to the use of the actual cautery and of melted pitch so much used centuries ago; it has, indeed, the merit of being less painful, although it is not itself devoid of pain, but it appears open to the grave objection that it does not accomplish all it claims.

Seeking simplicity in dressings and regarding it as of prime importance to preserve the wound in as clean a condition as possible, the English surgeons have, for a long time, used hardly any dressing except compresses of lint saturated with water or with some medicated solution; and to prevent the too rapid evaporation of the fluid, they cover the dressing with a smaller piece of air-tight material after the plan of Percy, Liston and Amussat. This practice, one of the best in its simplicity and in its results, is, however, open to some objections. Evaporation goes on in spite of the waterproof cover, especially at the edges of the dressing, and the dryness causes the compress to stick to the surface of the wound at these points, after producing excoriation of the granulations and a slight loss of blood when the dressing is renewed; this is not a grave accident, indeed, but one which still has a certain importance because in transforming into a sort of new wound, however small, an old wound and one whose granulations are in full progress, it becomes too often the source of erysipelas.

Convinced of the contagiousness of erysipelas and pyæmia, and believing that the propagation of the disease is by infection and that the contamination has as its agent or medium, germs which are carried in the air from one ward to another, to act as ferments on the surface of the wounds, Lister, of Glasgow, now Professor in Edinburgh, seeks to destroy these germs in the wound. To attain this result he washes the wound with a weak solution of carbolic acid, and covers it with a dressing of the same agent, urging the precaution meanwhile, with considerable minuteness, to cleanse by the same means the knife he uses, and to wash the ligatures in a mixture of the acid with oil. This antiseptic dressing enjoyed great favor in England for a time, but seems now in less use, from what I saw in a number of days' observation in London; but if it does not appear at present to give the same brilliant results, even in the hands of its originator, as were expected at first, if it does not seem to prevent the spontaneous development of erysipelas, it still appears at least to have some influence over the spread of this disease as well as of pyæmia.

If we seek the indications which surgeons have attempted to fulfil by their various dressings, we find them as follows:

To exclude the air.

To change the condition of the wound, when expedient, by medicated dressings.

To maintain a certain degree of moisture.

To prevent the decomposition of the pus taken up by the dressing.

To keep the wound clean.

To prevent the adhesion of the dressings.

To destroy germs which might be the source of infection.

A slight modification of the methods usually employed has enabled me, as I believe, to fulfil these various indications, as already stated. I have absolutely rejected all fatty agents whatever, and I extend the same proscription to diachylon, so far as fresh wounds are concerned; and in no case, at least in hospitals, do I use lint, because by its power of absorption it becomes the ready receptacle of infectious germs. I cover the wound with one or more compresses, saturated with a mixture containing one part of alcohol or camphorated alcohol, and nine parts of water; if the wound needs stimulating I add, according to the necessities of the case, a tenth part of a solution of sulphate of zinc. Over all I place a piece of oiled silk, kept in position by a few turns of bandage; and I take care that this covering shall be tight and entire. The evaporation of the fluid with which the compress is filled cannot progress, and the insensible perspiration, which occurs normally on the surface of the skin, being retained, the dressing becomes converted into a sort of continued bath.

Without the inconveniences of a maceration which distends the tissues and seems to lessen their vitality, without the annoyances caused by the necessity to use an apparatus applied with difficulty, I get the advantages of the bath of Mayor, Langenbeck and Valette, and those indeed of continued irrigation. The sedative effect of the water, modified according to necessity by the use of medicated solutions, controls the inflammation and keeps it within the bounds necessary to the process of cicatrization. The pus, excluded from the air, undergoes no change; it remains indeed about the wound, but the air-tight dressing showed us long ago the harmlessness of unaltered pus. The compresses cannot dry and adhere and are easily removed, and there is no fear of bruising the granulations. As regards cleanliness, it is seen at once to be absolutely attained. Finally, with respect to infection and the transportation of germs, the wound, being wet at the outset with alcoholized water, covered with compresses filled with the same fluid, and enclosed hermetically in an impermeable tissue, is fully protected from all contamination. This innovation upon a dressing in such general use, consisting essentially in the employment of a piece of oiled silk larger than usual, presents such an appearance of insignificance that I should have hardly dared to introduce it if it were not recommended by results which have convinced me of its efficacy.

In the months of January and February, 1868, when I had not yet begun to use this mode of dressing, I had in my female ward at La Cochin, and in the same bed, three cases of erysipelas. During the rest of the year two other cases occurred; in 1869, there were two, and two this year, one following partial sloughing of the flap after amputation of the breast, and the other, very slight, and extending only to a part of the cheek and forehead in a patient who had a granular conjunctivitis.

In my male ward during a very active service in which were a great number of severe cases, not a single instance of erysipelas occurred in 1868 or 1869, and only one case in the first two months of 1870. This one case, so far from proving the inefficacy of the dressing testifies in its favor. The patient had a large wound on the forehead and another smaller one on the scalp. Both healed kindly, but a small boil appeared on the back of the head. Fearing erysipelas, on account of the region, I ordered the dressing, but a slight illness detained me for a few days from my visits. My interne, thinking the complication of little consequence, omitted the dressing, and erysipelas was the result of his confidence.

I do not have the hope, still less do I pretend to abort spontaneous cases of pyæmia. In thirty months I have lost, by this grave complication, eight patients; three after an attempt to save the limb in compound fracture of the leg with protrusion of the tibia from the wound (a practice I have now abandoned); two after complicated fracture of the humerus; one after revulsion of the arm; one after a lacerated wound of the foot, and one following a whitlow; but this last patient, who succumbed five days after his admission, had already, when received into the hospital, the symptoms of pyæmia, whose first germs he had taken at La Pitié, from which he was discharged four days before.

On the other hand I have treated successfully, and cured without complication, four patients with fracture of the leg, one with fracture of the thigh, one with fracture of the clavicle, two with fractured humerus, one with fracture of the fibula—all compound; two others in which there was fracture of the elbow-joint with an opening into the articulation, and finally one in which was a fracture over and between the condyles of the femur, with protrusion of the bone and escape of blood and gas into the knee-joint.

Capital operations have given the following results, viz.:

	Cases.	Cured.	Died.
Disarticulation of the shoulder joint for gangrenous erysipelas, in a patient from medical side:	1		1
Amputation of arm,	1	1	
" of thigh,	3	3	
" of leg,	6	5	1*
" of foot,	2		2†

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* Pneumonia.

† One well, but died of phthisis after five months.

Amputation of fingers,	3	3	
Partial resection of tibia, olecranon, fibula,	3	3	
Resection of lower jaw and part of tongue,	1	1	
Resection of knee-joint,	1	1	
	21	17	4

The effect of this dressing on the progress of diffuse cellulitis or phlegmonous erysipelas has seemed to me equally remarkable. The affected part being kept in a sort of continued bath, but in a bath which does not cause maceration of the tissues, its swelling and redness are observed to diminish. I make use of Dobson's plan, however, when the disease is first commencing, and paint the part with tincture of iodine. Whatever part belongs to the antiphlogistic remedies and what to the dressing, out of thirty-six cases of diffuse phlegmonous erysipelas (eighty-seven cases of the hand, six of the hand and forearm, one of the wrist, eleven of the forearm, seven of the arm, two of the leg and one of the scalp), I have not had a single death; all rapidly recovering without even incurring those deep and extensive lesions which too often leave in their train complications more or less severe.

If, in fine, the dressings used can have any effect on the appearance of the complications so common in some if not in the majority of our hospitals, it is especially with reference to erysipelas that this influence is to be sought.

Recalling the time when, as assistant to my teachers at La Charité, Messrs. Denonvillers and Velpeau, I hardly dared to open an abscess for fear of the supervention of erysipelas, I am deeply impressed on seeing two years go by without the development of a single case in a ward where a great number of men were treated for wounds and lesions often of a grave nature. Formerly, when I performed an important operation like an amputation, my chief anxiety was lest pyæmia should follow; what I anticipated as a constant dread was death; what I now expect as the proper result of active intervention is recovery.

However slight may be the innovation I have introduced in dressings, I cannot but think that to it is to be accredited a considerable share in the result attained. Without doubt it would be better to compare the results of a longer period, two or three years more, in order to place me beyond the error of premature judgment; but I believed, if the confidence in facts observed was well grounded, our patients would be much benefited by a useful precaution: I thought that the introduction of this method into hospitals where erysipelas and pyæmia have prevailed for many years would allow its efficacy to be tested more fully: I hoped that if farther facts do not justify my expectations, the good will and indulgence of the academy would pardon me for having deprived it, on a subject of so slight consequence, of time which it could have employed more usefully.

Selected Papers.

DEATH RESULTING FROM AN OVERDOSE OF STRYCHNIA.

By Charles Bullock.

A case of death, resulting from an overdose of strychnia, occurred recently in Pennsylvania under circumstances which render the case interesting and instructive to both medical practitioner and pharmaceutist.

The patient had been laboring under an attack of partial paralysis, and the medical attendant directed the following prescription:—

℞. Strychniæ muriat., gr. iss.;
Liq. ferri iodid., ʒvi.;
Syr. zingiberis q. s. ut ft., f℥iij.
M. Sig. dose a teaspoonful.

The whole of this prescription was used as directed, and the bottle returned to the druggist, by order of the physician, for renewal of the medicine, the dose on renewal being increased to one and one-half teaspoonful. This was taken with apparent benefit to the patient, until the last dose, exhausting the contents of the bottle, was given. About an hour after, while at a meal, the patient complained of strange sensations, and was soon affected with tonic spasms, which are described by two medical gentlemen, who were called in, as well-marked results of an overdose of strychnia. Proper remedies were promptly used and the spasmodic action passed away, leaving the patient able to speak, but greatly prostrated, and, failing to respond to stimulants, death ensued in a few hours.

The bottle which contained the medicine was produced before the coroner's jury (composed of physicians and pharmaceutists). It appeared to have been drained of its contents to make up the last dose; adhering to the bottle were well-formed crystals, some of them about a line in length and one-fourth line in thickness. Unfortunately, no chemical analysis was made to determine whether the crystals were *undissolved* muriate of strychnia or iodide of strychnia. A microscopical examination failed to carry much weight, on account of the destruction of the form of the crystal by washing previous to mounting, the size of the crystal not being accepted in evidence, as crystals of iodide of strychnia were shown nearly as large, made by simple deposition from a warm saturated solution.

The pharmaceutist by whom the prescription was compounded testified, "that he weighed out the muriate of strychnia, threw it into a graduated measure, added the two other ingredients, and stirred them up with a bone spatula until he thought the strychnia had all dissolved, as he could see no undissolved crystals or solid matter." To a question, he replied that he noticed an opalescent appearance, resembling a quinine mixture.

An inmate of the house with deceased testified, "that she was sure that the bottle of medicine was never shaken."

The prescription as above given had been sent to several prominent pharmaceutists, and the compoundings criticized by the jury. In some no chemical change was discernible; in others crystals readily recognizable as iodide of strychnia were floating through the mixture and deposited in the bottom of the bottle. In one case large crystals were contained in the bottle, evidently of the original strychnia salt undissolved.

The jury, after weighing all the evidence, returned a verdict of "Death from prostration, following the accidental administration of an overdose of strychnia.

"The jury further find, from examination of the assistant pharmaceutist, by whom the prescription was compounded, a want of proper attention to, or information in manipulation, which they cannot pass without notice and reprimand, as both efficiency and safety may depend on careful manipulating skill when potent remedies are prescribed.

"They further find that the ingredients of the prescription are subject to such chemical changes as renders the strychnia contained therein *liable* to be precipitated to the bottom of the bottle containing the prescription; and if the bottle should remain without proper agitation, an overdose of strychnia might result."

So much for the history of the case. We now wish to make some remarks on the chemical and pharmaceutical character of the prescription, and throw out some thoughts on prescribing and compounding, as suggested by this case.

Muriate of strychnia is not officinal in the U. S. nor British Pharmacopœias, and is rarely prescribed. It is much less soluble than the sulphate, requiring 50 parts of water, at 71° F., for solution (Gmelin's Handbook). The solubility of iodide of strychnia is not found in any authority which I have consulted. It is spoken of as *very insoluble*. My own determinations make its solubility 0·54 parts in 100 parts of water, at 60° F.*

When a drop of syrup of iodide of iron is added to a cold saturated solution of muriate of strychnia, the insoluble iodide of the alkaloid is immediately formed.

I have before me the prescription alluded to in this communication, put up in two ways. In both the muriate of strychnia was previously dissolved in ℥iss. of water. In No. 1 the strychnia solution was mixed with the iodide of iron, and the ginger syrup immediately added and well shaken. In No. 2 the strychnia solution was first added to the syrup of ginger, well shaken, and the iodide of iron added. In No. 1 the bottom of the bottle is covered with crystals of iodide of strychnia, and many floating crystals suspended in the mixture. In No. 2 no decomposition is discernible, and after standing four days no deposit has taken place.

On page 1418 of the U. Dispensatory, 13th edition (1870), after quoting from this Journal the experiments of Bouchardat and Gobley on the insolubility of iodine combinations with strychnia, the authors add:—"But though this fact *establishes the impropriety of combining solutions of iodine and strychnia in prescriptions*, yet it by no means justifies the inference drawn from it, that iodine might serve as an antidote to strychnia. Indeed, the contrary has been proved by the experiments of Mr. S. Darby, who found the precipitated iodide of strychnia was highly poisonous to the lower animals, &c."

We have, in the above quotation, information given regarding the insolubility of iodide of strychnia and the impropriety of prescribing iodine and strychnia solutions in combination.

It is clearly the duty of the pharmaceutist to see, when potent remedies are prescribed in solution, that the *solution is complete*. He ought, also, if allowed to dispense such articles, to be informed regarding the decompositions liable to occur, and if possible guard against mischief likely to result therefrom, or else return the prescription to the writer, with his objections clearly stated. He should also notice, when such a prescription is returned for renewal, whether any deposit has taken place in the bottle, and remove it by washing should such be the case. The question whether it is his duty to mark the bottle "Shake well," when the recipe gives no such direction, is one admitting of different opinions; but we think, when so marked, the error, if any, is on the side of prudence.

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* Hydrochloric and even acetic acid much increase the solubility of the iodide, without apparent decomposition, when the acids are very dilute.

We would suggest to physicians, when prescribing a remedy like strychnia in solution to its usual *full dose*, to prescribe it alone, and to give *separately* whatever else may be deemed advisable. We have in our experience been made aware of changes unforeseen and unknown to us, until the event developed the facts.—*American Journal of Pharmacy.*

Medical and Surgical Journal.

Boston: Thursday, September 1, 1870.

THE CHILDREN'S HOSPITAL.

More than a year ago, our predecessors in office placed in their editorial columns a communication* relating to a new charitable institution in Boston. The idea of founding a hospital exclusively devoted to the care of sick children had long been floating in the minds of one and another of our physicians and benevolent citizens—suggested either by a humane consideration for the peculiar wants of that interesting class of sufferers, or by a knowledge of the good results which have been accomplished by such establishments in the Old World. Only one attempt, however, had hitherto been made to carry it into effect; and that, on account of the expense and unforeseen practical difficulties, was, after a brief experiment, reluctantly abandoned by its charitable projector. The idea was brought to the notice of some of our benevolent citizens somewhat more than a year ago, and, with their coöperation, the plans suggested were put on trial. We are glad to be put in possession of facts which show that the anticipations and hopes of the founders have been fully realized—indeed, that they have gone much beyond what was expected.

The views put forth by the originators of the plan were so fully expressed in our former number that we refrain from repeating them at length. The subject had been well studied before it was announced to the public, and the experiment was only made after mature deliberation and a careful study of the needs of the public. It was well known that provision already existed in Boston for the care of sick and maimed children; but it was seen that there was a large class of our poorer population who were constantly allowing their children to pass through acute attacks of disease in their own poor dwellings, in the midst of the various disadvantages which poverty entails; it was well known that the parents of such children were unwilling to be separated from their little ones, under such afflictions, by placing them in general hospitals, looking on hospitals as a place principally for cases of accident or as a last resort in illness. The projectors of The Children's Hospital hoped that they might accomplish that which the general hospitals could not so readily reach, by inducing the parents of children to send them to a hospital, made attractive in many ways, and do away with the aversion which the poor naturally feel for institutions of the kind, and in this wise *commence the education* of the poorer classes—inducing them to put their children under comfortable and hygienic circumstances while sick or maimed. The originators of the plan recognized the fact that there were prominent reasons why children could not be so well cared for in adult hospitals as in those especially devoted to their use; they knew that there were cases which were constantly denied admission at the other institutions of our city, on perfectly reasonable grounds, which could be properly admitted to a charity of their own. They wished to carry out a system, already so successfully inaugurated in some of our charities, of voluntary nursing by kind and cultivated

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* Journal, April 1, 1869.

Christian women, who have had experience in hospital work and who had devoted themselves to charity; who were willing to engage in the work for no other recompense than the satisfaction of ministering to the physical and spiritual comfort of the sick. It is obvious that very few could be found, who are qualified for this office, who have the requisite faith, patience and self-denial. Such a corps of helpers, however, the hospital has been able to secure; and the institution has been conducted by them with entire success. The managers felt, still farther, the importance of the fact which our large charities cannot so well recognize, that too little attention is likely to be paid there to the future *permanent* benefit of the patients. We sometimes fail, as physicians, to inquire, while we tide over the little sufferers in what seem to be temporary illnesses, what shall be life and health giving remedies for their whole life-journey. We forget our duty to build up the future *man*, while endeavoring to cure the *child*.

These and similar considerations induced the founders of the hospital to work for its establishment, and it has already become, as they predicted it would, an honorable and popular charity. The hospital was established in a moderate-sized house in Rutland Street in July of last year, and, since that time, it has cared for more than sixty patients, a number small in itself, but of some importance for the first year of a young institution. The character of the cases has been very satisfactory. With a certain proportion of chronic cases, as was to be expected, the majority of the patients have suffered from acute diseases and injuries, and have offered not only much of interest in the way of instruction, but a series of cures, comparing favorably with the statistics of other hospitals. During the past six months the house has been kept almost constantly full, and the demand for beds has been considerably in advance of the supply. The managers of the hospital, feeling the necessity for larger accommodations, have fortunately been able to procure a large mansion, on the corner of Rutland and Washington Streets, formerly the residence of a well-known citizen, and have fitted it up for the use of the institution; it is now already in successful operation. The object of the hospital is, as before, the reception and care of children between the ages of two and twelve, suffering from acute medical and surgical diseases. The beds in the hospital are free to those who are really poor, but a moderate charge is made to such as are able to pay; patients outside the city are received only on payment of the regular board. With an increased number of beds and more ample arrangements for the administrative department, the hospital bids fair to go on satisfactorily in its good work; and should the managers carry out, in the future, their plans looking to the admission of students, the education of nurses, a sanitarium in the country, &c., they cannot fail of meriting the esteem of the profession.

One word should be said of the great success of the system of nursing during the past year. In their first annual report, the managers thus speak of this feature of the institution :—

"The main point with them has been to secure for the children while inmates of the hospital, in connection with the best of care, a positively Christian nurture. And both these results, they are convinced, have been perfectly accomplished under the existing administration. Every person who has visited the hospital has been deeply impressed and highly gratified by witnessing the beautiful and striking effects which have been produced by the admirable management of the Superintendent and the ladies associated with her. A neater, more orderly, harmonious and happy group of children cannot be found in any Christian household. The whole air of the hospital, instead of being gloomy and depressing, is cheerful and gladsome. On entering the general ward one almost forgets that he is in the midst of the sick and suffering, as he sees on all sides smiling faces, and little hands playing with toys, or turning over the pages of illustrated books, and hears cheerful voices prattling merrily, or singing alone or together pleasant songs."

So far as the professional care of the children is concerned, the Medical Staff agree that no system of nursing has come under their notice which can compare with it in faithful efficiency and the attainment of good results.

IN MEMORIAM.

In the midst of the preparations for war, just as the streets of Berlin had begun to echo the tramp of troops passing through on their way to the Rhine, the scientific world was called upon to mourn the loss of one of its brightest ornaments, humanity one of its most distinguished benefactors. Albrecht von Graefe died, July 20th, aged 43 years. As one who has not only been bound to him by ties of friendship, but had the opportunity in years gone by of listening to his instructions, it is the melancholy privilege of the writer to offer this hasty and imperfect sketch of his career.

Graefe was born in Berlin in the year 1828, losing his father the renowned military surgeon at an early age. At school he manifested a strong taste for mathematics, and, having attained much proficiency therein, turned his attention to the natural sciences and particularly to chemistry. Subsequently he studied medicine, and graduated at the age of twenty with much distinction.

To complete his medical education and perfect himself in some special branches he now set out on his travels, first visiting Prague where Professor Arlt then occupied the chair of Ophthalmology. It was this distinguished man who first awakened Graefe's interest in this department, and the relation of master to pupil soon cemented a warm and life-long friendship. From Prague he went to Vienna and became an attendant on the instruction of the venerable Friedrich Jaeger, then in the zenith of his fame. Thence to Paris, where, as the pupil of Sichel and the *chef de clinique* of Desmarres, he enlarged his experience and prosecuted independent investigations, the results of which were soon to appear. After a brief stay in London, Dublin and Edinburg, he returned home and commenced his brilliant career.

His ample fortune enabled him to establish, in the outset, a private hospital, designed for both rich and poor. In concert with Arlt (now transferred to Vienna) and the renowned Donders, Professor at Utrecht, he founded the magazine known as the *Archiv*, which has continued to the present day, and in whose ample volumes are contained those discoveries and investigations which have rescued Ophthalmology from its former position as a department of surgery, and elevated it to the rank of an independent science. Nor need it be said that the lion's share in this task was borne by Graefe himself. Material for his studies did not fail to be richly supplied. As his renown rapidly augmented, patients poured in from every side, coming in many cases from remote lands, to enjoy the advantage of his skill. His pupils multiplied day by day, not only students of medicine but experienced physicians hastening to avail themselves of his instruction. The University elevated him to the post of Professor, the Goverment bestowed on him the distinction of Privy-councillor, while other high marks of consideration constantly accompanied his progress. There is hardly in the history of medicine another instance of a man so young attaining such universal and deserved celebrity.

A complete catalogue of his labors would be out of place in so brief a notice as the present. An allusion to a few of the better known must suffice, and I am unfortunately unable to vouch for the chronological order of these, writing as I do without any power of reference to books or papers. One of his earliest treatises was on the physiology and pathology of the *trochlearis* muscle, and was followed by an essay on *strabismus*. Both of these papers have become classic, and mark the first advances into an obscure and almost unexplored field. This was always a favorite department of Graefe's, and it was his merit to have elevated the treatment of strabismus, of muscular paralysis and of muscular insufficiency to an almost certain basis, by means of a series of exhaustive investigations, and to have caused the operations for their relief to rank among the most satisfactory in surgery. He traced the influence of the internal inflammation known as *sclerotico-choroiditis* on myopia, and pointed out its appropriate treatment. He discovered the seat and nature of *glaucoma*, a disease as lamentably prevalent as it was formerly universally fatal to vision, and gave to the world the operation for its relief. This was perhaps his crowning glory, and more than anything else contributed to the spread of his renown. More recently, the extraction of cataract engrossed his special attention, and the operation now in general use, and which is conceded by nearly all to offer the best chances of success, is the result of his inventive skill.

His assiduity was unwearied. Before the progress of disease had rendered it impossible, he was at his desk at seven in the morning, answering letters, writing for his *Archiv*, or engaged in study. At nine came his lecture at his private hospital, alternating with a clinical conference, at which patients were brought forward and their cases discussed. Then his visit at the Charité, his round in the city, a hasty dinner often snatched in his carriage, and at 2, P.M., his operations, sometimes twenty or thirty in number, and embracing every variety of ophthalmic surgery. The Poliklinik followed, at which from one to two hundred poor patients were admitted, prescribed for, and, if necessary and space permitted, retained in the house for operation or treatment. A hasty visit through the wards of his extensive establishment, and then he drove rapidly home to hold his own private office hours. These commenced at seven in the evening and would last till late into the night, from fifty to seventy being often prescribed for. When they were gone, Graefe would return to his scientific labors, interrupted in the morning, and continue them till forced to seek repose.

Such restless activity finally told on a system naturally delicate and severely affected by an attack of pleurisy ten years ago, during the progress of which his life was more than once despaired of. A phthisical tendency, long suspected, developed itself during the past year with startling rapidity. At the commencement of the summer of 1869 he was forced to abandon his lectures for the purpose of seeking another climate, and the Heidelberg Society, at its meeting in September last, was for the first time deprived of the presence of its founder. Late last autumn he returned to Berlin, and for a time carried on his usual labors with a portion of his former energy. Called in consultation to Vienna in the course of the winter, the stairways and waiting-rooms of his hotel were blocked with the concourse of patients who had heard of his sudden arrival, and sought to avail themselves of his skill. On his return to Berlin he steadily failed, but insisted on working to the end. An operation of importance demanded his attention. He was lifted from his carriage, carried in a chair to the bedside, and there with trembling hand he treated his last patient. It was his final visit to the hospital. He lost ground day by day, lingered on through the spring and early summer, and at three o'clock on the morning of July 20th passed quietly away.

Graefe's personal appearance was most striking. Tall and thin, slightly bent forwards, his long flowing hair streaked with gray, his features finely cut and regular, his expression full of vivacity and intelligence, he never failed to impress the beholder with the feeling that he was in the presence of a man of rare and wonderful genius.

His beneficence was unbounded. Not only his personal dependents, but the poor in general were the recipients of an unstinted liberality. I am able to state from personal knowledge that cataract patients devoid of means were received into and maintained in his private hospital, free of charge, provided with glasses after the operation, and furnished with a passage home. A large portion of his princely income was thus bestowed in charity.

None knew Graefe as well as those who sat at his feet, listened to his teachings, watched his works and strove, at a distance, to follow in his path. Never in our profession was a brilliant career more suddenly arrested, never a master more regretted by those whose double happiness it was to call him both teacher and friend.

HASKET DERBY.

Innsbruck, July 31, 1870.

WE are also permitted to make an extract from a private letter of Dr. R. H. Derby, of Boston, describing the funeral of v. Graefe :—

"I wrote you a few days since of the terrible loss the world had sustained in v. Graefe's death. Saturday evening was his funeral, and I remained so long in Berlin to see the last honors tendered to my dear teacher and friend. All Berlin seemed to forget for the time the anxious thoughts that filled every one's mind of the impending war. The Victoria Strasse, where Graefe lived, all the neighboring streets, wherever there was standing room, were filled with deputations from the city, students with their corps and banners, equipages from the Court with footmen in royal livery. The funeral cortege was one of the largest that I ever saw. The house was reached with difficulty, so dense was the crowd—all of the halls were filled; finally, we entered the room where all that was mortal of Graefe lay. The coffin was covered with white flowers and immortelles. At one end rested a silk cushion covered with decorations and orders conferred at different times upon Graefe—one of the last from the Emperor of Russia, given on the occasion of his last visit to Berlin. (He sent it the morning after his arrival, with the remark, 'it was not alone for the service that he had rendered the Russian Royal family, but that every university in his kingdom was supplied with a pupil of Graefe's.') In a semicircle about the catafalque stood Graefe's wife and the three little children and his sister, the faculty of the University, chamberlains from Court, and those who had known and loved him. A funeral oration was pronounced and a hymn sung by a choir of men. It was a sad moment. The young wife could hardly have felt more lonely than those of us who were not united by family ties with him. I had learned to regard Graefe as something superhuman, in comparison with whom other men seemed mere pigmies. How often in the last few months, amid the anxieties and responsibilities of my position at the clinique, have I gone to the Professor for advice, and how did every difficulty seem to fade away with his assistance. Thank Heaven that it was my fortune to have so much of Graefe during the last year; it has been an experience worth all my other years of study.'

THE Boylston Prizes of two hundred dollars each, offered by Harvard University, have been given to Dr. H. P. Walcott, of Cambridge, and Dr. G. D. Daly, of Le Sueur, Min., for dissertations on "Aphasia, or the Relation of the Brain to Speech."

Medical Miscellany.

Rhode Island Hospital.—The attention of students in the third year of their course and of recently graduated physicians is called to the advertisement for house-physician in the Rhode Island Hospital, which becomes vacant on the 1st of September.

According to Dr. Pavy, opium, morphia and codeine all possess the property of checking the elimination of sugar by the urine. Codeine is most powerful, commencing with one half-grain dose and going on to ten-grain doses thrice a day. A man, aged 50, after restricted diet and alkalies, was passing urine of specific gravity 10·38, with 26·64 grains of sugar per ounce. After thirty days of opium there was no sugar, and the specific gravity of the urine was 10·25. On leaving off the opium again, the specific gravity rose to 10·48, and 10·65 grains of sugar were passed in twenty-four hours. On renewing the opium, the sugar immediately lessened, although he continued to take ordinary food. A woman, aged 68, passed five pints of urine of 10·40 specific gravity, and sugar to the extent of 32·72 grains daily. By the use of opium, with ordinary diet, the urine in three months was of specific gravity 19·16, and quite free from sugar. She continued well for twelve months; then anxiety and overwork renewed the disease. Again three months of codeine completely cured her. This is a great discovery of Dr. Pavy's.—*National Med. Journal.*

Ammonia Hypodermically in Collapse from Uterine Hæmorrhage.—Dr. E. G. Wake, of Collingham, reports a case of collapse from the above cause, in which the pulse was not felt at the wrist for more than one hour. In his eagerness to apply a powerful remedy, he injected a few minims of strong liquor ammonia over the sternum. This operation was repeated three other times, upon other parts of the body. He introduced, at each injection, from ten to twenty minims. The patient rallied speedily under the influence of the stimulant and made a good recovery. The treatment, however, was followed by four frightful sores.—*Richmond and Louisville Medical Journal.*

Incompatibility of Sulphate of Quinia and Digitalis.—A physician having prescribed the syrup of digitalis, of the Codex, and directed the addition of acid sulphate of quinia, observed a precipitate in the bottle. Presuming a mistake had been committed by the apothecary, he sent the mixture to a chemist for examination. The physician was told that his prescription directed the mixing of incompatibles, the tannin of the digitalis combining with the quinia to form an insoluble tannate. The chemist, M. Stan. Martin, states that the alkaloids should be administered uncombined with other articles, and, when required in solution, water should be the vehicle.—*Journal de Pharmacie et de Chimie.*

A New Anæsthetic.—Dr. Liebreich, of Berlin, asserts that he has discovered a substitute for chloroform, the use of which is free from all the disagreeable sensations consequent upon the use of that drug. He calls it æthyliden chloride. It is a colorless fluid, of an agreeable odor and very volatile. Sleep suddenly overtakes the inhaler, and he wakens quickly and involuntarily, as from a natural slumber.

If this statement be true, Dr. Liebreich will prove himself one of the greatest benefactors of the human race that has lived. It were glory enough for one man to have introduced so great a boon as chloral hydrate.—*Med. & Surg. Rep.*

The Glycerole of Iodine.—This preparation, recommended for loss of voice, is composed of a solution of sixteen grains of iodine in one ounce of inodorous glycerine.—*Med. Record.*

To Correspondents.—Communications accepted:—The Use of Pepsin—Ultimum Moriens—Iodide of Potassium in Bronchial Asthma—Case of Stricture of the Rectum from Cancerous Inflammation; Death.

Pamphlets Received.—Specialism, in its Relations to Practical Medicine. By S. G. Hubbard, M.D., Professor of Obstetrics and Diseases of Women and Children in Yale College. Pp. 19.—Reports of the Board of Visitors and Trustees, and of the Treasurer, Superintendent, Building Committee and Auditor, of the New Hampshire Asylum for the Insane, to the Legislature, June Session, 1870. Pp. 44.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending Aug. 27, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases	
		Cholera Infantum.	Consumption.
Boston	129	30	16
Charlestown	17	6	0
Worcester	33	9	6
Lowell	19	2	2
Milford	5	1	0
Chelsea	4	0	1
Cambridge	32	9	3
Salem	12	2	2
Lawrence	7	0	2
Springfield	7	1	0
Lynn	15	3	2
Pittsfield	2	1	0
Fitchburg	3	0	0
Taunton	4	2	1
Newburyport	7	1	1
Fall River	9	3	2
Haverhill	5	0	3
	310	70	41

From all the above-named places there are reported twenty-two deaths from dysentery and diarrhœa, and sixteen from typhoid fever.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Aug. 27th, 129. Males, 72; females, 57. Accident, 3—apoplexy, 1—inflammation of the bowels, 2—congestion of the brain, 1—inflammation of the brain, 3—bronchitis, 1—cancer, 4—cholera infantum, 30—cholera morbus, 3—consumption, 16—convulsions, 4—cyanosis, 2—debility, 2—delirium tremens, 1—diarrhœa, 10—diphtheria, 1—dropsy of the brain, 2—drowned, 3—dysentery, 4—scarlet fever, 2—typhoid fever, 4—disease of the heart, 4—disease of the kidneys, 2—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 1—marasmus, 4—measles, 1—old age, 3—paralysis, 2—peritonitis, 2—premature birth, 1—purpura, 1—teething, 4—unknown, 4—whooping cough, 1.

Under 5 years of age, 68—between 5 and 20 years, 12—between 20 and 40 years, 19—between 40 and 60 years, 16—above 60 years, 14. Born in the United States, 97—Ireland, 19—other places, 13.

THE

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Original Communications.

APHASIA, AND THE PHYSIOLOGY OF SPEECH.

PART I.—APHASIA.—(*Continued.*)

Defective Expression.—In opposition to the limitations implied in the terms aphasia and aphemia, Dr. J. Hughlings Jackson objects that they define too clearly a group of symptoms whose boundaries must, in the nature of things, be indefinite. He thinks the various faults of speech, from disorderly articulation to incoherence of ideas, should be included under the general term "Defects of Expression," as such a generality is less likely to fetter inquiry, by giving, or pretending to give, a definition where none is possible. He says:—"It is not so difficult to show that ataxy of articulation and so-called loss of memory for words are really defects of the same kind." (Med. Times and Gaz., June 23d, 1868.) He further says:—"All these various defects are disorders in a certain series of cultivated anatomical possibilities of motor and sensory centres, ascending in complexity in inter-relations and width of associations." (Lancet, Dec. 1, 1866.)

The objections of Dr. Jackson are fully borne out by the great individual differences observable in cases of aphasia, depending on the character, degree and location of the cerebral lesion. While accepting aphasia, then, as a useful generic term, each case should be studied in its physiological relations, to determine, if possible, at what stage in the elaboration of speech the processes are interrupted.

It is not intended to multiply examples here, since so many well-observed cases are now on record, and may be found in the papers elsewhere referred to. A glance at the varieties of defective expression will give an idea of the scope of this subject. Jaccoud, for instance, divides the "ascending series of anatomical possibilities" into five stages; or, in other terms, considers defects of expression under five forms, viz.: (1) Paralysis of the tongue. (2) Loss of coördination in the motor centres. (3) Interruption of voluntary transmission. (4) Amnesia of words. (5) Sluggishness.

Dr. Bastian, in a long and interesting article on "Loss of Speech in Cerebral Diseases" (Brit. and For. Med.-Chirurg. Rev., 1869, vol. 43, p. 209), presents a classification of the varieties of defective expression, and gives the following tabular synopsis. It will be seen that the five stages of Jaccoud are included essentially, with the exception of the third, the first being stated under three forms, and the fifth in terms of similar import.

LOSS OF SPEECH.	Ability to articulate unimpaired.		(1) Absence of wish to speak, as in hysteria or insanity.
		Wish to speak existing.	(2) Various forms of paralysis and incoördination of memory. *Amnesic* defects.
			(3) Memory existing, words being revived as remembered sounds, the mechanism by which these excite the automatic acts of speech is interfered with. *Ataxic* defects.
	Ability to articulate impaired.		(4) Slightly, from paralysis of the 9th nerve, &c., in cases of hemiplegia, with or without coëxisting aphasia.
		Gravely,	(5) In some severe cases of hemiplegia, with or without aphasia.
			(6) Advanced cases of glosso-laryngeal paralysis.

Many varieties of aphasia depend on the extent of the lesion, a limited and wide-spread influence on the same anatomical plane producing different symptoms. In this way we may best account for the loss of memory for substantives and other parts of speech, and even for particular letters. From such partial amnesia to complete amnesic aphasia there may exist a great variety of defect. Those cases in which a single word or phrase remains, or in which there is articulation without sense, may be considered as practically complete, since no ideas are conveyed by the inappropriate use of such expressions as *yes, no, I don't know, always*, and the like, or by the utterance of such jargon as *vousi, cousisi, tau* or *ta ta*. The few words aphasics use are generally automatic and not volitional.

The facility with which aphasic patients sometimes give utterance to oaths and other emotional phrases, is a singular phenomenon. Such ejaculations as *my God! ma foi! oh dear!* and the grosser oaths are common. Dr. Jackson remarks that "swearing, strictly speaking, is not a part of language. It is a habit which has grown up from the impulse to add the force of passing emotions to the expression of ideas. Although oaths differ from mere alternations of tone, in that they consist of articulate words, they are generally used in talking, not to express ideas, but to make up by force of delivery what is wanting in precision of expression. * * * * * These expressions (used by aphasics) are not voluntary, as the patients cannot repeat them. The will cannot act, but somehow emotion, anger for example, gets the words passed through the convolution of language. Just as a paralyzed foot will jump up when the sole is tickled, so the words start out when the mind is excited." (London Hospital Reports, vol. i.)

Ataxic aphasia may likewise vary in the extent to which coördination is impaired, and in its concurrent phenomena. Aphasia may be transient, or permanent, and last an hour or a life-time. It may be the only symptom, or coexist with hemiplegia, unilateral convulsions, chorea, hysteria or insanity, and depend on various lesions whose nature will determine the special characteristics of each case. The phenomena of stammering, the absence of speech in congenital deafness and idiocy, the defective speech of intoxication, general, and glosso-laryngeal paralysis, show the wide range of possible illustration. The various and complex relations of speech to the cerebral functions, render the defects of speech equally various and complex, so that however desirable such an amplification of our subject, as Dr. Jackson suggests, it is, to say the least, impracticable.

The consideration of Jaccoud's fifth stage alone, opens the whole subject of disordered ideation, and the corresponding defects of expression. It is not sluggishness merely which produces aphasia, since a voluntary suspension of the verbal impulse, in obedience to a delusion, or a fixed idea, may result in prolonged silence. The disorders of association, in all their interesting variety, are also mirrored in the consequent disorders of speech. It is probable some cases of aphasia may be due to interruption of the established association between ideas and sensory impressions, rendering the written or the spoken word unsuggestive. Dr. Bartholow mentions a case, in which the patient could speak plainly, and converse with ease. He could write, but could not read what he had just written. Neither could he read books or papers, the visible signs of language conveying no sense to his mind. (Cincin. Med. Repertory, Jan. 1869.)

Place of Lesion.—Clinical observation has long since established the frequent concurrence of aphasia and right hemiplegia. The coincidence was first noticed in 1800, and has been repeatedly confirmed by numerous observers. In 1865, Dr. Jackson had never seen a case of aphasia and left hemiplegia, and Trousseau relates but one, which he then considered an unique case. It seems to be a fair exception, however, to the general rule, and it is necessary to admit that left hemiplegia and aphasia may supervene suddenly, at the same moment, as the sole apparent symptoms.

In 1868, Dr. J. W. Ogle published a collection of thirty cases, with the avowed object of presenting as many seeming exceptions as possible (Lancet, 1868, vols. i. and ii.) In all of them the lesion is supposed to have been on the right side of the brain. The description of the aphasic symptoms is exceedingly vague, being confined in many cases to such terms as, "articulation less clear," or "impediment of speech," or "impaired speech," &c. In many cases the defect was clearly paralytic, and it is clear the writer did not intend to limit himself by Trousseau's definition. In eleven cases the disease was found in the right hemisphere at the autopsy. In nineteen the presence of some degree of paralysis on the left side was the only evidence attainable. It is not intended to disparage Dr. Ogle's attempt, but it would be unfair to place his cases in the scale against those of true and complete aphasia without explanation.

The following table is given by Dr. Seguin.

APHASIA, WITH HEMIPLEGIA.

Authorities.	*Right.*	*Left.*
Trousseau, 1865, Acad. de Med.,	125	10
Baillarger, 1865, cases from La Salpêtrière,	30	1
Jackson, London Hospital Reports,	34	3
Robertson, 1867, J. of M. S.,	3	
Do., Times and Gaz., Sept., 1865	2	
Archives Générale de Méd.,	2	
Dr. Austin Flint, Sr., New York Med. Record, vol. i.,	4	
New York Hospital, 1830-1867,	43	3
	243	17

Before seeing the above I had made a list of 176 cases with right and 11 cases with left hemiplegia. Dr. Bateman reports 63 cases of aphasia, with paralysis in 32 only: occurring 21 times on the right, 7 times on the left, and in 4 cases the locality is not mentioned. M. Dax gives 140 observations to support his view of the location of the lesion in the left hemisphere, and M. Broca makes the proportion between the right and left as 1 to 20.

That no such proportion exists in other unilateral cerebral lesions is shown by the following facts. Drs. Charcot and Vulpian, in 110 cases of hemiplegia, found the lesion in 58 on the right, and in 52 on the left side. Andral in 169 cases of cerebral softening found the lesion in 73 on the right, and in 63 on the left side, both sides being affected in 33. Embolism is rather more frequent on the left side.

The evidence for a location of the lesion in aphasia in the anterior lobe, is less directly clinical and depends on observations of injuries before, or of lesions after death. Gall, Bouillaud, Serres, Pinel, Bohamun and others, long ago maintained such a location—and recent observations tend to confirm it. Like that of M. Dax this law is not absolute. We have seen what Bouillaud claimed for it. Of the seven or eight hundred observations which he collected, 85 were cases of lesion, of one or both anterior lobes, with loss of speech, and the rest cases of lesions in other parts of the brain without aphasia. To the 85 he adds, later, 31 cases positively supporting his law of location.

Andral states that in 14 cases collected by him of losses of speech, there was no visible alteration of the anterior lobes, the middle being affected in 7 and the posterior in 7. In 37 cases of lesion of one or both of the anterior lobes, speech was abolished in 21. (Clin. Medicale, p. 119.)

Forbes Winslow says he has in 54 cases detected considerable lesions in the anterior lobes, and no loss of speech, and relates two cases in which loss of speech resulted from wounds of the anterior lobes without describing the extent of lesion.

Trousseau presented to the Academy a list of 34 cases, of which 18, of course including those in favor of M. Broca's more precise location, were in accordance with the location of Bouillaud. Of the 16 opposed to it, in 12 there was no aphasia, the lesions being in the anterior lobes, and in 4 there was aphasia with lesions not affecting the anterior lobes.

According to Dr. Seguin's figures, made up to 1868, aphasia has occurred with lesions of the anterior lobes in 536 cases, of the corpora striata in 6, and of the middle and posterior lobes in 7. Aphasia without lesion has been reported in 3 cases. One by Gairdner (Glas. Med. Jour. June, 1866); one by Hillairet (Jour. de Med. Mentale, Sept. et Oct. 1866); and one by Dr. Seguin himself (Quar. Jour. Psychol. Med. Jan. 1868). The evidence respecting the comparative frequency of lesions in the two anterior lobes he states in detail. In 514 cases confirmed by autopsy, the lesion was found in the left anterior lobe, and in 31 cases in the right. I find, after having written the following account, that he also uses the case in illustration. I retain it because of the local interest it has excited.

The remarkable case of injury to the head, from a tamping iron, so well known in this vicinity, has an indirect bearing on the question in hand. The iron passed upwards from a point in the base of the skull 1¼ inches to the left of the median, in the junction of the lesser wing of the sphenoid and the orbitar process of the frontal bone. It comminuted and removed the entire lesser wing, with one half the greater, as well as a large portion of the orbitar process. The iron emerged at the middle and upper portion of the frontal bone. It entered the left hemisphere, therefore, at the fissure of Sylvius, and must have produced serious lesion of the middle and frontal lobes. There was at one time coma from the pressure of an abscess near the orbit, but at no time was there aphasia; speech being unaffected even immediately after the accident. There was no paralysis, but the mind was considerably disturbed in its balance. (Med. Soc. Pub., Vol. ii. p. 329.)

This case furnishes negative evidence only, against a location in the anterior lobes, and if we suppose the iron to have passed anteriorly to the corpus striatum, and to the inside of the third convolution, the absence of aphasia would be consistent with the location of M. Broca.

The theory of M. Broca, which locates the faculty of articulate language in the third left, frontal convolution was based, as we have seen, on two cases, neither of which was purely aphemic. He has since adduced twenty cases which serve to confirm this theory (Archives Generales, June, 1865). Of 32 cases presented by Trousseau, 14 confirm and 18 are opposed to it. Of the latter, some of which afford negative evidence only, 11 were with, and 7 without an autopsy. He relates one case of aphasia with left hemiplegia, which was remarkable for showing a lesion confined precisely to M. Broca's location, but in the *right* hemisphere.

I add to the general evidence above adduced, some tables of autopsies in aphasia, selected from those cases in which the symptoms and lesions were recorded with sufficient exactness to be of value, and not with a view to support or oppose any theory of location.

No.	Sex.	Age.	Symptoms.	Lesions.	Authority.
1	F.	32	Right hemplegia and complete aphasia. Signs of chronic endo-pericarditis, and mitral regurgitation. Said only "Oh pity," and used a few gestures. The attack was sudden.	Died four years after attack. Extensive valvular disease.—Gen. softening, more marked on left. Old yellow softening of ant. upper portion of intra-ventric. nucleus of left corpus striatum.	Trousseau and Bazin, Clinical Lect., vol. i. p. 233.
2	M.	60	Paralyzed. (Right hemiplegia by inference.) *Looked* as if he understood, but could only say "Oh mad," and shake his head.	Yellow softening of left hemisphere near insula of Reil, extending to post. portion of 3d left frontal convolution. Left mid. cereb. plugged.	Trousseau, Clinical Lectures, vol. i. p. 239.
3	M.	51	Aphasic 21 years. Could only say "tau tau." Right hemiplegia for ten years before death. Gestures expressive.	Cavity full of serosity, occupying a large part of left frontal lobe, and extending to middle lobe posteriorly, and inwards to insula of Reil.	Broca, first case. Bul. Soc. Anatom., August, 1861.
4	M.	84	Complete aphasia. No paralysis. Could say *yes*, *no*, *three*, and *always*. Pantomime expressive. Used his four words with judgment. Could not guide his hand to form letters. Attack sudden. Died of fracture of femur, ten months after.	Old hæmorrhagic cyst full of serosity, involving *only* the posterior third of the second and third frontal convolutions. Extended to the insula of Reil, but did not affect it.	Broca, second case. Ibid., Nov., 1861.
5	F.	47	Right hemplegia and aphasia, following an apoplectic attack. Recognized persons, but could only say "tata." No lingual paralysis.	Softening of lower marginal and part of second temporal convolutions on left. Also two posterior convolutions of insula of Reil, and extra- as well as part of intra-ventric. nucleus.	Charcot and Broca. Trousseau's Clinical Lect., vol. i. p. 247.
6	F.	73	Complete aphasia, followed by right hemiplegia. Only said "yes sir." Mind impaired. Gestures inexpressive.	Left middle cerebral art. plugged, probably by thrombosis. Both art. atheromatous. Softening of post. part of left supra-ventric. nucleus. Old lesions in corpus striatum.	Vulpian, Ibid., p. 248.
7	F.	17	Sudden right hemiplegia and complete aphasia. Made a single exclamation. Died 3 weeks after.	Aneurism of left mid. cereb. art. just below the corpus striatum. Rupture into left vent. Soft vegetations of mitr. valve.	Jackson. London Hospital Rep., vol. i. p. 426.
8	M.	40	Right hemiplegia and loss of speech, occurring suddenly. No cardiac murmur heard.	Left corp. striatum was largely softened at centre. Rest of brain normal. Soft red vegetations on aortic valves.	Ogle. Med. Times and Gazette, April 30, 1864.
9	F.	21	Right hemiplegia, with defective articulation. Words clipped and running into each other. Later, used words incorrectly. Anæmic.	Plugging of both mid. cereb. arteries. Softening of left corp. striatum and of ant. part of right middle lobe. Fibrin adherent to valves of heart.	Ogle. Ibid., July 2d, 1864.
10	M.	26	Right hemiplegia and complete aphasia, occurring suddenly. Health previously good. Only said "yes" and "no." Died eleven days after.	Brain generally soft. No clots found. Mid. cereb. art. pervious. Tubercles in arachnoid near circle of Willis. Serum in left vent., 1½ oz.; in right, ½ oz.	Jackson. London Hospital Rep., vol. i. p. 441.
11	F.	40	Right hemiplegia and complete aphasia. Could only say "yabby." Had epileptiform attacks.	Effusion of blood all over surface of brain. Wasting of left ant. pyramid. Examination incomplete, but aneurism of left mid. cereb. art. suspected.	Jackson. Ibid., p. 444.
12	M.	—	Progressive right hemiplegia and failure of speech. Could write at first, but misused and mispronounced words.	Abscess in upper part of left hemisphere, with 2 oz. of pus. Brain in front of it soft as custard.	Watson. Practice of Physic, p. 512.
13	F.	13	Sudden right hemiplegia and loss of speech. Could say "ta" and "to," and make signs. Expression intelligent. No labial or lingual paralysis. Died in a month.	Rupture of left mid. cereb. art. at fissure of Sylvius. Softening of adjoining parts of frontal and middle lobes. Posterior part of 3d left frontal convolution involved. Left corpus striatum softened.	Fox. Lancet, Aug. 11, 1866.
14	F.	47	Slight paralysis of right side and difficulty of articulation. Called "druggist," "yollet." Could not write. Began "many" with a "C," and showed much distress at her failure. Said "I can't do it, do it." Embolism of left femoral artery.	No disease, except softening in post. part of the external or inferior (i. e. *third*) left frontal convolution, and in left parietal lobe. Supposed to have been due to embolism.	Saunders. Medical Times and Gazette, April 7th, 1866.

No.	Sex.	Age.	Symptoms.	Lesions.	Authority.
15	M.	49	Right hemiplegia and complete aphasia. Only said "yes," and usually misapplied it. Never knew how to write. Died at end of a month.	Large clot found on left side, with softening extending from corpus striatum to middle cornu. Insula soft. Pia mater tore into cavity at this point, with softening extending to 2d and 3d left frontal convolutions, the transverse parietal and floor of fissure of Sylvius. Grey matter seemed intact, except at insula.	Jackson. Lancet, Dec. 1, 1866.
16	F.	81	Repeated apoplectic attacks, affecting the right side, with complete aphasia. Could say "yes" and "no," but misapplied them. Wrote nothing but "ms" and "is."	Cavity just behind post. part. of third left frontal convolution, involving it and corpus striatum in the softening; also post. cornu of left lateral ventricle.	Edes. Boston Med. and Surg. Journal, Feb. 6th, 1868.
17	M.	—	Absence of speech for eight days after injury to brain from the point of an umbrella, which pierced the socket of left eye. Could write. No paralysis.	Softening and suppuration of left anterior lobe, as far as to the lateral ventricle.	Bouillaud. Bul. de l'Acad., vol. 30, p. 624. (Reynaud.)
18	M.	—	Soldier, shot in left superciliary arch. During ten days that he lived, difficulty of articulation and complete loss of memory. Answers in monosyllables. No paralysis.	Softening, with pus and blood occupying two thirds of left anterior lobe.	Ibid. (Haspel.)
19	M.	—	Man died in twenty hours after a fall. "Came to himself," and showed intelligence by signs. Speech abolished. No paralysis.	All that portion of the right anterior lobe lying on the orbit was reduced to a pulp to the depth of two lines.	Ibid., p. 625. (Perrier.)
20	M.	47	Loss of memory for substantives. Spoke in circumlocutions. Intelligent. No paralysis.	Large clot in right ant. lobe, with softening of convolutions. Extended from post. sup. and external portion downwards and forwards.	Ibid., p. 626. (Chegoin.)
21	F.	55	Blow on left temporal region at orbitar apophysis. On eighth day fever, followed by slow extinction of speech. Responded by signs. No paralysis. Died on the twentieth.	Membranes adherent over anterior third of both front. lobes, with softening beneath. An abscess in each ant. lobe in front, the right size of hen's egg, and left of pigeon's egg.	Ibid., p. 627.
22	—	—	Embarrassment and then complete abolition of speech, with preservation of intelligence, as shown by signs in response to questions.	Softening of anterior inferior surface of both frontal lobes.	Ibid., p. 628. (Maquet.)
23	M.	31	Fell on his feet from a ladder, and died six weeks after. Great impairment of intelligence. Gradual loss of speech, which became total. No paralysis.	Membranes tore away grey substance easily. Softening and erosions most marked on ant. and inf. surface of right frontal lobe, extending to fissure of Sylvius. Less marked in same locality on left.	Ibid.
24	M.	65	Could only say "oui" and "non," but understood well what was said to him. No paralysis.	Clot size of pigeon's egg, with softening at anterior, inferior & inner part of left frontal lobe.	Ibid., p. 736. (Grisolle.)
25	M.	50	Could only say "Mon Dieu" and "cabeza" (tête). Intelligence clear.	Softening of both front. lobes, including 1st, 2d and 3d frontal convolutions. Medullary substance gone. Grey matter adhering to meninges.	Ibid. (Gubler.)
26	M.	52	Suddenly became mute. Aphonia, with loss of motion in tongue. Intelligence preserved.	Softening in left ant. lobe of parts of 1st, 2d and marginal (3d) convolutions. Rest of brain normal.	Ibid., p. 737. (Gubler.)
27	M.	32	Loss of speech and right hemiplegia. Partial recovery. Intelligence preserved.	Convolutions of left fissure of Sylvius softened and atrophied. A yellow spot in left corpus striatum.	Ibid.
28	F.	61	Apoplexy and right hemiplegia. Could only say "mami" and "non." Features showed intelligence. Understood what was said to her.	Destruction of the ant. half of the third left frontal convolution & the neighboring orbitar ones.	Ibid. (Perroud.)
29	F.	42	Entire loss of speech. Responded by inarticulate sounds. Later, could say "oui" and "non." No paralysis.	Softening of the anterior marginal convolution of the fissure of Rolando, extending to third frontal convolution. (*Left*, by inference.)	Ibid. Tenneson.

No.	Sex.	Age.	Symptoms.	Lesions.	Authority.
30	M.	39	Spoke unintelligibly a medley of syllables, but said "Mon Dieu" plainly. Intelligence clear. No paralysis. Had "general head symptoms."	General superficial softening, most marked on the left and anteriorly. On the right, inflammation and exudation at and near insula of Reil.	Ibid. (Perroud.)
31	F.	82	Pronounced a few syllables without meaning, and always the same. Right hemiplegia.	Cavity size of pigeon's egg in left frontal lobe. Posterior half of third left frontal convolution gone.	Ibid. (Charcot.)
32	F.	52	Right hemiplegia. Total loss of speech. Knew her friends, and nodded for "yes." Moved lips and tongue well.	Destruction of third left frontal, lower part of transverse parietal, and most of inferior marginal convolutions.	Ibid.
33	F.	61	Speech much embarrassed. Right hemiplegia. At times could only say "va si, va si." Memory and intelligence fair.	Extensive softening of inferior and lateral half of left parietal lobe, extending forward to the 2d posterior convolution of the insula of Reil and to the 3d frontal convolution.	Ibid.
34	F.	42	Sudden and complete aphasia, with right hemiplegia. No lingual or labial paralysis. Looked animated, and made signs with left hand. Died 4 months after the attack.	The third left frontal convolution was included in a softening, the limits of which are not described. M. Foville considers it a good case in support of M. Broca's theory.	Ibid., p. 739. (Foville.)
35	M.	34	Fracture of cranium. Aphemia immediate and persistent in spite of return of consciousness and ability to understand questions.	Contusion and disorganization of third left frontal convolution.	Ibid. M. Auge Duval.
36	M.	30	Could only say "yes" and "no." Talked otherwise unintelligibly and could not write. Entered hospital 7th, and on 16th had fits and *swore* in the night. Slight paralysis of face on right side. Would not protrude his tongue. Soft murmur at apex of heart. Died comatose.	Extensive softening of left middle lobe, reaching the surface at the margin of the fissure of Sylvius in its horizontal part. Extended forwards to and perhaps beyond the fissure of Rolando. In centre high as corpus callosum. Arteries normal. Tricuspid valves slightly thickened.	Ogle. Lancet, Dec. 14th, 1868.
37	F.	55	Left hemiplegia for four years. Sudden aphasia, and death in five days after. Made himself understood by gestures.	Softening of rt. corpus striatum. On left side, softening of insula superficial and circumscribed, and limited to grey matter. Occlusion of artery supplying insula.	Bateman. Jour. of Mental Science, Oct., 1869.
38	F.	16	Sudden right hemiplegia and aphasia. Writes name clumsily with left hand. Nods for "yes," &c. Mitral murmur. Death from coma, 19 weeks after.	Embolism of mid. cereb. art. Softening of left corpus striatum, thalamus, insula and end of 3d frontal convolution. Mitral vegetations. Emboli in spleen.	Niemeyer, Times and Gazette, Jan. 8, 15 and 22, 1870.

Causes of Aphasia.—The nature of the lesion in aphasia, is of more clinical importance than its precise location. We are called on to treat, when treatment is possible, not aphasia but congestion, anæmia, hæmorrhage, rheumatism, syphilis, embolism, and the like. The prognosis, obscure at the best, also depends on a correct estimate of the character and extent of the lesion. In transient cases, we may attribute the loss of speech possibly to congestion, but more frequently to anæmia of a sudden and local character. It is certain that a stoppage of the blood supply from spasm of an artery, or from embolism, interferes as effectually with the functions of the nerve cell as congestion. A slight hæmorrhage or small emboli may also produce transient loss of speech. Reflex action, which is responsible for so many functional derangements, is also assigned as a cause of aphasia by Dr. Brown Séquard.

Softening is found in most cases ending fatally, but is of a secondary nature. When confined to those regions of the brain supplied by the middle cerebral artery it is often due to embolism. In 1853, Dr. Senhouse Kirkes established the relation which exists between embolism and softening of the brain. He also published a case of right hemiplegia and aphasia from embolism. In 1864, Dr. J. H. Jackson advanced the theory that embolism is the usual cause of aphasia. This he set forth in a paper entitled "Aphemia in its relation with right hemiplegia and valvular lesions of the heart." (London Hosp. Rep. Vol. 1.) The cases presented by Dr. Jackson all lacked the confirmation .of an autopsy. He says, "I cannot be absolutely certain that embolism was the cause of the symptoms in the following cases, not even in the cases of valvular disease, but I submit that it was in most of them."

In 20 out of 34 cases he finds evidence of embolism in the circumstances of the attack, taken in connection with the existence of valvular disease of the heart. In the remaining 14 there is no other evidence than the sudden occurrence of uni-lateral paralysis in persons previously in apparent health, showing the attack to be rather the result of an accident to the nervous system, like the plugging of an artery, than of hæmorrhage from atheromatous vessels, or softened tissues.

The opinions of numerous late authorities upon embolism and cerebral softening, will be found in Reynolds's System of Medicine (Vol. 2, p. 453). He enumerates as causes of embolism, the fibrinous vegetations and depositions, found generally in the left cavities of the heart, or adhering to atheromatous patches in the arch of the aorta; the softening of old clots in the heart, and cancerous or tuberculous particles brought from the lungs by the pulmonary vein. Particles and fragments from these sources falling into the current of the blood are carried to the brain most frequently by the middle cerebral arteries, these being the largest and most direct branches of the internal carotids. The immediate result of this accident is a sudden anæmia in the parts supplied by the occluded vessel. The remote effect is softening of the central portion of this region, it being furthest removed from anastomosing branches.

Thrombosis may also induce softening of the brain. It depends on contractions of the arteries, on diminution of the force of the heart, and on increased plasticity of the blood; in fact, upon all those conditions which favor local coagulation.

The danger from plugging below the circle of Willis, is inconsiderable, as Dr. Cohn's numerous observations and experiments tend to show (Klinik des Embolischen Gefäss Kran. Kheiten. Berlin, 1860). According to him, softening does not follow embolism of the internal carotid. Why embolism should be particularly disastrous when affecting the middle cerebral arteries, will be seen in their comparative lack of anastomosing branches with other divisions of the circle of Willis. The middle cerebral supplies the corpus striatum, and a large tract of convolutions, but the softening may be limited to the former.

According to Laborde (La Ramollissement et la Congestion du Cerveau, Paris, 1866), there may be secondary softenings of the convolutions due to atrophy, depending on a severance of the nerve fibres from their ganglionic connections. He attempts to show a relation between lesions of the anterior parts of the corpora striata and optic thalami and softening of the frontal convolutions. Drs. Vulpian and Charcot deny this relation. (Physiol. Gen. et Comp. du Syst. Nerveux, 1866, p. 653.)

It is plain that whatever be the nature of the lesion, if it specially affects the formative processes or the transmission of nervous impulse concerned in speech, aphasia must follow. There is reason to believe, that aphasia may occur independently of the grosser and visible lesions to which we have referred. "Indistinctness of speech" is noticed as a symptom of hæphestic hemiplegia, or hammer palsy, by W. F. Smith, M.D. (Lancet, Mar. 27, 1869), in four out of seven cases. In all these the hemiplegia, usually incomplete, was of the right side, and having no other obvious cause than the prolonged use of heavy hammers. The patients were young and athletic men, and recovered in a few months, under tonics and rest. In the seventh case the loss of speech is described more minutely. There was aphemia and agraphia. The patient called *surgeon dentist*, *juggery gogo*, and could not finish his name in writing, always stopping before the last letter.

In these cases the disease is rather motor than mental, indistinctness of speech being a fault of coördination, rather than a loss of memory for words. The hemiplegia may have been due to local nervous exhaustion affecting the neighboring parts concerned in speech, in some way, by extension of the lesion. I saw a case three years ago, where the chief symptoms were those of neurasthenia. There was constant facial spasm, without neuralgia, affecting the right orbicularis palpebrarum, and a misuse of words, with indistinctness of articulation, which suggested general paralysis. Upon a critical examination by Dr. Brown Séquard, there was found decidedly greater debility on the right than on the left side. These symptoms all disappeared under a tonic course of treatment, except the spasm, which nothing seems to affect.

Dr. Bartholow (Cincin. Med. Repertory, Jan. 1869) mentions a case of aphasia and right hemiplegia, with rigidity, due to irritative lesion, and which he attributes to lead poisoning. There was a want of evidence of the usual causes of aphasia, and there was evidence of the presence of lead in the system. The patient improved under the use of iodide of potassium, strychnia and atropia.

Dr. Bateman mentions the following causes as having been assigned by different writers for the occurrence of aphasia, viz.: wounds, tumors, embolism, nervous shock, epilepsy, neuralgia, hysteria, reflex action, sun-stroke, extreme cold, narcotic poisoning, blood-poisoning, uremia, alcoholism, plumbism, snake bites, &c.

[To be continued.]

ULTIMUM MORIENS.

By Thomas Waterman, M.D., Boston.

I am induced to report the following autopsy by reading the accounts of irritability of the auricle on pages 68 and 75 of the present volume of the Journal. The term "*ultimum moriens*," as applied to the right auricle of the heart, originated with Galen, thus showing the very ancient recognition of its *post-mortem* irritability.

The case occurred in 1867, when I was surgical *interne* at the Massachusetts General Hospital. A. T. B., æt. 50, an employée on the Boston and Providence Railroad, was run over by a freight train at 6 o'clock, P.M. He died on his way to the hospital, at half past 6. There was a compound comminuted fracture of the right thigh just below the trochanters, the limb being almost severed from the body and only hanging by a portion of integument at the posterior part. The left leg was completely smashed between the knee and ankle into many pieces.

I opened the chest at 9 o'clock (two hours and a half after death). The heart was quite warm, and there were two drachms of clear serum in the pericardial cavity. On scratching or pricking the right auricle with the point of the scalpel, it contracted from the base towards the apex of the auricular appendage in an undulatory manner, the fringes of the appendage rising into sharp serrations and then subsiding again after the contracting wave had passed by. When the undulation reached the apex it rose upward, twisted upon itself with a jerk, and then instantly fell back upon the aorta from which it rose. No contraction took place, except upon the application of artificial stimuli. On scratching the apex, the wave started from this point and ended at the base, though not invariably, the contraction beginning usually at the junction of the auricle with the ventricle and ending at the apex, whenever the stimulus was applied. There was a small, horizontal muscular projection on the auricular appendage about the size of a pea, and resembling a miniature heart, which contracted when irritated and became shortened in its long diameter from base to apex and widened laterally, behaving like the single ventricle of the frog's heart as it contracts in a horizontal position after death.

The rest of the heart was now thoroughly squeezed, to drive out any blood that might remain in its cavity, but no contractile response was elicited from the left auricle or the ventricles by the application of stimuli, electric or otherwise. At half past 9, one pole of the magneto-electric battery being applied to the nape of the neck and the other to the right auricle, a continued current of electricity was passed through. The auricle then began to contract quite rhythmically—from base to apex, as before described—at the rate of seven beats in the minute. During the next hour the auricle ceased to contract throughout its whole extent, the area of contracting tissue radiating from the point of stimulation becoming smaller and smaller in size as the irritability of the heart diminished. The heart, when opened, contained no blood, clotted or fluid, nor did the aorta. At 11, the right auricle was cut away from the rest of the heart, and at half past 11 (five hours *post mortem*) it still occasionally contracted feebly just at the point of irritation.

Electricity produced no effect upon the muscles of the arms, even when the poles were inserted into the substance of the muscle at its origin and insertion. On striking the biceps of either arm a sharp blow with the hand, a ridge of muscle arose, raising the skin over it, and the forearm became very slightly flexed. On repeating the same manœuvre to the muscles on the ulnar aspect of the forearm, a muscular ridge arose, the fingers were flexed and the hand was slowly pronated. A sharp blow also excited peristaltic movements in the intestines.

Citric Acid in After-pains.—Dr. J. B. Chagnon, in the *Canada Medical Journal* for May, recommends citric acid for the pains following labor, and declares that it has never failed in his hands. He gives five grains in two or three ounces of water every five hours. It acts as a nervine, and as a preventive of inflammation.—*Pacific Medical and Surgical Journal.*

Selected Papers.

ON THE VALUE OF INDIAN HEMP IN MENORRHAGIA AND DYSMENORRHŒA.

By Alexander Silver, M.A., M.D., Assistant-Physician to Charing-cross Hospital, &c.

I am desirous of bringing the following cases before the profession not because the discovery of the value of Indian hemp in these troublesome maladies is new, but rather because it is not sufficiently well known. It is to Dr. Churchill, of Dublin, the profession is indebted for making known the excellent effects of Indian hemp in uterine disorders; nevertheless, I was led to the conclusion independently.

A woman, whose case I regret I cannot give in greater detail, came to Charing-cross Hospital complaining of violent pain in the loins, and of a persistent bloody discharge, the blood being sometimes clotted, and then giving rise to severe bearing-down pains during expulsion. This had lasted without interval for upwards of six months, insomuch that she was greatly reduced both by the discharge and the constant pain. To get rid of the latter, all sorts of sedatives, among others the hypodermic injection of morphia, were tried locally and generally. At the same time iron was given in considerable doses, but altogether without effect. The pain was so harassing that, after having tried a variety of sedatives, I was induced to prescribe ♏ xxv. doses of the tincture of Indian hemp, in hopes of giving some relief, and, to my surprise, when she returned we were told that the medicine had acted like magic, both pain and discharge having totally ceased after a few doses. Some iron was ordered, on account of the anæmic state of the woman, and she continued under observation for a considerable time, during which she remained quite well. Afterwards her visits were discontinued, and she has not now appeared for some months. It is perhaps fair to conclude that she remains well. Some similar cases, although not of the same intensity, yielding to the remedy in an equally satisfactory manner, an inquiry was made into the history of the drug, but neither in our ordinary works referring to the diseases of women, nor on Materia Medica, was mention made of it as producing good effects in menorrhagia; at last, however, it was found that hemp had been used in such cases with very good results by Dr. Churchill. Conversing with professional friends, I have found most equally ignorant on the matter as I had been, and I accordingly resolved to collect a few cases (a few of the most recent have been selected) as the best way of enforcing the value of the remedy.

Here is a case which is typical in its way.

Case I.—E. B., aged 24. Married fifteen months; no family; no miscarriages. Has always been regular till she had scarlet fever in December, 1869. Since she recovered from that fever has suffered from great general debility, pain under left breast, and flushings succeeded by cold chills. Menstruates every three weeks, the discharge being sometimes scanty, at other times very profuse, accompanied by pain in the loins. Came under the care of Dr. Silver on June 10, being at the time unwell; the discharge very profuse, and accompanied by much pain. She was ordered Tr. Cannab. Indicæ, ♏ xx., bis die, and found relief after the first dose; the discharge and pain speedily ceased.

June 13.—Suffers now merely from debility. To have liq. ferri perchlorid, ♏ xv., in inf. quassiæ.

June 17.—No return of flow; debility still continues; much frontal headache. Iron does not suit; to have quinine.

July 5.—Headache nearly gone, and much better otherwise. Flow begun again, normal. A little pain in the back. To have quinine again.

No. 2 is also satisfactory, and would have been more so had the woman been better fed; still she has greatly improved.

Case II.—C. H., aged 39, married twelve years; one child aged 11 years; six miscarriages, occurring generally between the sixth and seventh month; last miscarriage last February. General health good; menstruation always regular. Husband healthy; occupation, straw-hat maker. For the last nine months has lived rather low, husband being out of work. After each miscarriage discharge profuse, continuing about a week. Just before the time of the last menstruation (May 18) received a sudden fright, and immediately became unwell. The discharge was more profuse than usual, and was accompanied with pain in the loins. Came under Dr. Silver, May 24, and was ordered the Tinct. cannab. Indicæ. Found relief after the first three or four doses, losing the pain and discharge. Had first dose of medicine on May 24, continued it till June 6. Feels now very well, with the exception of slight debility.

June 21.—Flow recurred; scarcely any pain, only very slightly in the back; no clots as formerly.

July 5.—Flow lasted nearly a week;

very little pain—not more than when in usual health; has felt tolerably well since, but lacks strength; not over well fed.

These two cases, although satisfactory in one way, are not so striking as might be, the excessive flow not having continued so long as in the first case noted. The following is in that respect more striking, and illustrates the speedy and efficacious action of the hemp in proper cases. It will be remarked that when the discharge recurred at the normal time the patient was in the country, and not under treatment. Had she been at the Hospital she would have been ordered the hemp in smaller doses for the relief of the pain. The age of the patient is another feature in the case worthy of note, although not unfrequently the menstrual flow continues until a considerably more advanced age.

Case III.—A. C., aged 51, married; has been married thirty years; had six children. One child was born at the eighth month of pregnancy, lived four days after its birth. Two other children born at full time lived only a few hours after birth. Father and mother both living—father in good health, the mother bedridden. Has worked very hard as charwoman up to three or four years ago. Began to menstruate when 18 years old. Previous to that time suffered very much from pain in head, back, and side. Had her first child in her 20th year, and her last in her 27th year. Ever since that time has been subject to a pain in the left groin. It would come and go, and was accompanied by a swelling in that region. When the swelling went, the pain went. She had then a nasty yellow discharge lasting perhaps a week. Yet during all this time she was regular to the day, and continued to be so until March 17, when, being unwell at the time, an alarm of fire was given, and as she was the only person in the house, she was greatly alarmed. From that time up to May 10 she continued to be ill, sometimes more, sometimes less. The discharge was passed partly clotted, and with great pain. When seen first she was ordered a tonic, but that did no good. On May 10 she had tinct. cannabis Ind. ♏ xxv. bis die (Tuesday). On Thursday the discharge stopped. Since then she has been quite well, but weak, till she went into the country. After being there a week, the flow recurred, with a good deal of pain and partially clotted; this occurred on June 4. It lasted six days, and the pain was severe; but the flow ceased at the normal period, and she is now (June 21) well, but weak. To have steel.

The above cases might be called appropriate for the use of the remedy in every respect, the menorrhagia being merely functional, as we term it, and not dependent on any organic mischief. But even in those instances where there is local mischief in the shape of tumors or malignant disease, the hemp still asserts its influence over the sanguineous discharge, but only for a time. Upon the whole, therefore, if the hemp be given repeatedly, each time arresting the discharge and relieving pain, but when omitted these again recur, there is just cause to suspect the existence of uterine mischief other than merely functional disturbance. Thus, in a case of uterine fibroid tumor of great size, rising nearly to the umbilicus, and, of course, elongating the body of the uterus, the periodic flow was greatly increased, and the patient was consequently much weakened; even here the hemp proved satisfactory in arresting the discharge, but not in preventing its recurrence. In another instance, where the discharge proved intractable, a small polypoid growth was discovered, and removed, to the relief of the patient; but perhaps the following case exhibits those features in such a fashion as best to impress them on the mind:—

Case IV.—E. M., aged 38; married seven years; no family; three miscarriages within first three years of married life, occurring about the fifth month; always healthy; husband healthy. After the last miscarriage she was quite regular till the end of last summer (1869), when, without any assignable reason, the flow became much more frequent and abundant, and was accompanied with much pain in the back, worse just before the usual period. Instead of being fluid, the flow became clotted, but there was no special bearing-down pain. Gradually she became weaker, and the flow came once a fortnight, and sometimes oftener. She applied to Dr. Hutcheon, of Priory-road, Wandsworth-road, Lambeth, and got relief from her pain, but there was no change in the flow. He afterwards brought her to me, when she was ordered Cannabis Indica, with speedy relief. She took in all three or four doses, but again the discharge returned. The remedy was repeated with a like result. The following note bears date:—

June 10.—After four doses (♏ xx.) the flow again ceased, but a white discharge succeeded. She left off the medicine, and again the discharge recurred. To have Cannabis and Iron alternately.

17th.—The Cannabis has again arrested

the discharge, but the flow returned soon after with clots and bearing-down pain. She has now a very great discharge, but is well otherwise. To have Cannabis with Ergot and Iron alternately.

By this time, suspecting something more than mere functional disturbance, I was anxious to procure a more exact knowledge of the origin of the discharge, but the condition of the woman precluded anything like a vaginal examination. Still as the hemp had always been successful in arresting the sanguineous flow, it was given in somewhat increased doses with the usual result.

24th.—Has taken Cannabis twice a day. Flow stopped completely on Tuesday. Today was examined by Dr. Black, Physician Accoucheur, Charing-cross Hospital, who found malignant disease of the cervix involving the os uteri and beginning to invade the vagina.

The origin of the discharge, both colored and colorless, was thus accounted for.

This case serves to show how far we may rely on the drug for arresting sanguineous uterine discharges from whatever cause; it also shows that it may be employed to facilitate uterine examinations which might be otherwise objectionable.

A certain number of practitioners, I find, have been in the habit of using this remedy, especially for painful menstruation not being mechanical. Dr. Hunt, of Hoxton-house Asylum, assures me he has given it in over a hundred cases, and never knew it to fail after the third dose in relieving pain and discomfort.

The dose I ordinarily prescribe is twenty minims of the tincture. It is best given in combination with aromatic spirit of ammonia.—*London Med. Times and Gazette.*

Medical and Surgical Journal.

BOSTON: THURSDAY, SEPTEMBER 8, 1870.

AMERICAN SURGERY IGNORED.

DR. J. R. BEGG published in the London *Lancet* for June 4th, 1870, an article entitled "Nitrous Oxide Gas in Excision of the Mamma." The details of the operation were not different from that usually performed. The gas was inhaled for six minutes and fifty seconds. It required one minute and twenty seconds to thoroughly narcotize the patient. Dr. Begg observed that "there was slight lividity of the face and slight rigidity of the muscles (much less than I have seen when chloroform was employed)"; "there was no sickness, headache, or vomiting;" the patient "expressed herself as quite comfortable when she got to bed." Dr. B. also makes the following statement:—

"But although the gas has proved a success in this case—and this is the largest operation on record in which it has been given—it yet remains to be proved whether in operations requiring a longer time for their performance it would prove as safe as the anæsthetics now commonly administered."

We refer Dr. Begg to the account of an excision of the breast, performed while the patient was under the influence of nitrous oxide gas, at the Massachusetts General Hospital, in 1848, and published in this JOURNAL for Feb. 13th, 1868. In this, as well as in one performed subsequently and reported in this JOURNAL for March 5th, 1868, where the patient was under the influence of the gas for nineteen minutes, the phenomena observed corresponded closely with the description of Dr. Begg. Dr. Marion Sims performed the operation at Paris in the latter part of 1867, and used nitrous oxide gas as an anæsthetic.

HOSTES, DUM VULNERATI, FRATRES.

WE are in receipt of a letter and enclosures from Dr. Edward A. Crane, Secretary of the American International Sanitary Committee at Paris, in response to our Editorial of August 4th. We extract a paragraph from his communication for our readers.

"The present moment has seemed particularly favorable for the introduction into European armies of those principles of sanitary science which, during our own war, were so universally as well as advantageously enforced in hospitals and in camps, as also for the introduction of whatever American hospital appliances are superior to those used in European armies. Very few persons are acquainted with the comparative excellence of nearly all the material used by the American government in the interests of its sick and wounded. Our tents and ambulance wagons especially are unrivalled, and we shall spare no pains to make known here the immense advantages to be derived by employing the same."

"We have just received from New York the U. S. hospital tents, and with these we shall commence our field hospitals."

The following correspondence, also, cannot fail to be of interest, as indicative of the kind of work upon which the American committee is engaged.

15 Rue de la Paix, Paris,
Dr. Marion Sims, July 28, 1870.

Dear Sir,—On the 18th of July a committee was appointed at a meeting of American citizens held in Paris for the purpose of acting in connection with the "American Association for the Relief of the Misery of Battle-fields," the *Société de secour aux blessés*, and other kindred societies.

This committee, assured of the cordial support and coöperation of the French *Société de secour aux blessés*, is now occupied in making such preparations as seem most necessary and indispensable to the accomplishment of its proposed object, which is, to give aid and succor to the wounded of all armies during the existing war.

The several ways in which such aid and succor may best be given, time and experience will show us. It seems, however, to be desirable, at the opening of this war, to offer some material evidence of that sanitary and surgical practice which, during our own late war, was followed by results as unusual in the history of military medicine as they were highly gratifying to us. Such evidence can be given by the establishment of a field hospital, which shall be under the direction of American surgeons and attendants, as also by a proper exhibition of those appliances, modes of operating and of treatment which have secured for conservative surgery a lasting reputation in the United States.

To accomplish this part of our plan the services of a surgical staff must be obtained. We accordingly write to you to-day for the purpose of soliciting your coöperation in the formation of such a staff, the immediate direction of which in the field we should be most happy to assign to you as its chief, should it be agreeable to you to accept the duties connected with that position.

Believe us, yours very sincerely,
Thomas W. Evans, Chairman.
Edward A. Crane, Secretary.
Col. James M'Kaye, }
Albert Lee Ward, } Committee.
Thomas Pratt, }

47 Faub. St. Honoré, Paris,
July 29, 1870.

Gentlemen,—I do not feel at liberty to decline the position you offer me as chief of your surgical staff. I therefore accept the appointment, and will at once enter upon its duties. Believe me, yours, &c.

J. Marion Sims.

Messrs. Evans, Crane, Ward, M'Kaye, Pratt, Committee.

The Magic Lantern applied to the Demonstration of Diseases of the Skin.—M. de Valcourt, of Cannes, writing to *L'Union Médicale*, says:—

"I had the opportunity recently of witnessing a curious exhibition given by Dr. Squire, of London, one of the most distinguished of the English dermatologists. He had invited his *confrères* to test the utility of the magic lantern in demonstrating the diseases of the skin. The meeting was held in the Polytechnic Institute, a kind of conservatory of arts and sciences, containing large galleries filled with various philosophical apparatus, and with geological specimens and other scientific collections. Two halls, communicating with the museum, are used for such scientific reunions as the present, and sometimes for more popular exhibitions. In the largest of these halls fifteen hundred doctors were assembled.

"The Professor commenced by explaining his object in proposing photography and the magnifying glass for medical demonstrations. There are, he said, two ways of teaching pathology: on the one hand, didactic courses in which the professor enumerates the symptoms and demonstrates the diagnosis, with no other means of illustration save his own language; on the other, the hospital clinic, where the patients furnish visible examples of the various diseases. The advantage of the former method is that it permits the lecturer to adopt a systematic course of instruction and to address a great number; but it is very fatiguing for all and is imperfect in many points where oral explanation cannot take the place of observation. The second mode, though better than the other in that it provides living, visible illustrations, does not leave the lecturer the choice of his subject; he must speak on the case before him, and, moreover, if the class be numerous, everybody cannot get near enough to see distinctly. For these reasons, and in order to combine the advantages of both methods, Dr. Squire has had made transparent, colored photographs of patients with diseases of the skin, and with the help of a magic lantern he uses them for medical instruction.

"The apparatus, illuminated by means of the oxy-hydrogen light, gives an astonishing effect in clearly defining the smallest details without any alteration of the colors. The Professor exhibited several of the most common typical diseases ; there were among others two pictures of a syphilitic subject taken at a six months' interval, and showing thus on the same individual the disease in its primary and later stages. This could not be done as well by any other method. The success of the exhibition was complete, and was very gratifying to the learned Professor, who, as long ago as 1864, published an atlas of photographic views of skin diseases, many plates of which will bear comparison with those of the collection more recently issued with such favor in France by MM. Hardy and de Montinèja.

"During my trip in the United States, I was struck with the beauty of the large colored plates which are in general use by the professors in the medical schools in their lectures. Prof. Bigelow, of Boston, showed me a score of large views for demonstrating the regional anatomy of the perinæum, and to show also the various layers of tissue traversed by the instruments in performing lithotomy. The students could thus follow each step in the operation, a matter of impossibility upon the patient alone. The usefulness of these methods is equally obvious in surgery, in medicine, in anatomy and in chemistry."

Mons. Desormeaux, in an essay on cancer of the larynx, arrives at the following conclusions :—

"1st. Cancerous tumors of the larynx, being generally, if not always, composed of epithelial tissue, which offers greater chances of cure than true cancerous growth, one should never hesitate to operate for their removal when entire extirpation appears possible.

"2d. The symptoms manifested, the progress of the disease, and especially examination by means of the laryngoscope, will enable us to reach an almost positive diagnosis ; and, supposing even that there be an error in determining the nature of the morbid growth, the moment the tumor threatens suffocation to the patient, there is an indication to resort to an operation provided it be impossible to destroy the growth from above.

"3d. This operation is laryngotomy. We should not hesitate to freely open the parts, in order to attack the tumor with advantage and to effectually destroy it.

"4th. The danger in laryngotomy is slight. The fear of changing the voice, even of inducing complete aphonia, should not deter when the disease in question necessarily terminates fatally.

"5th. When the affection originates in the larynx, removal may be attempted whenever it has not extruded above the upper orifice, a point to be determined by the laryngoscope, and so long as it has not broken through the cartilaginous case which for a long time resists its inroads. This last stage of the disease is recognized by the increased size of the larynx, and by an irregularity of form and an abnormal firmness.

"6th. When these symptoms make it clear that complete extirpation is out of the question, or when the adjacent glands are enlarged, tracheotomy is the only resort, in order to avoid suffocation and to prolong the life of the patient.

"7th. After laryngotomy and the destruction of the tumor, a tube should be kept in the trachea long enough to make sure that there is no recurrence. The opening thus maintained allows free exploration of the larynx from below upward, and the cauterization of doubtful points ; and, moreover, if the necessity for laryngotomy recurs, it simplifies the operation."

Cancer of the Lung—By Arthur Leared, M.D., M.R.I.A., Senior Physician to the Great North'n Hospital.—Cancer of the lung is a disease of sufficiently rare occurrence to make the following case worth recording :—

An agricultural laborer, about sixty-eight years of age, was admitted into the Great Northern Hospital, May 29, 1869. He was a man of spare build, and stated that he had been always healthy until about two months previously, when he began to suffer from cough and oppression at the chest and to expectorate blood. Before coming to the hospital he had been under the care of Dr. Barrington, of Bexley Heath, and he had also been for some time an out-patient at St. Bartholomew's Hospital.

His state on admission was as follows:—He was thin and feeble, voice very weak, aspect that of hectic fever, rather than of malignant disease, pulse quickened, decubitus on the left side. He complained of pain in the right side of the chest, and had a troublesome cough. The sputa were copious, viscid, blood tinged and had an offensive smell.

On the right side in the space between the clavicle and the lower edge of the second rib tenderness on pressure, complete dulness on percussion, and absence of respiratory sounds were observed. Vocal fremitus was not affected. Below the second rib the breath and percussion sounds were normal. Posteriorly on the same side a tumor which had been first noticed a week previously, of the size of half a goose's egg, was seen bulging from under the scapula. The long axis of the tumor which encroached upon the edge of the axilla was perpendicular and extended two inches lower than the dulness anteriorly. The tumor was slightly tender on pressure, of firm consistence and perfectly dull on percussion. The intercostal spaces below the tumor were normal. No enlarged glands could be detected anywhere. The patient attributed the tumor to having strained himself by working at a straw-cutting machine. The diagnosis was cancer of the lung with continuity of growth between the cancerous organ and the tumor.

On June 4th, the anterior dulness extended downwards to the upper edge of the third rib, and hæmoptysis was increased. Three days later the dulness on percussion extended downwards to the lower edge of the third rib. Cough more troublesome, but less hæmoptysis. Six days afterwards the anterior dulness had made no progress. The patient had of late been obliged to sleep well propped up, and he was failing in strength. Three days from this date hæmoptysis to a considerable extent occurred, and his right hand and arm were œdematous. The anterior dulness was unaltered. Eight days still later he was in every respect worse; the anterior dulness extended to the upper margin of the fourth rib, and the tumor was considerably enlarged. On the fourth day afterwards he died from exhaustion.

Post-mortem Examination.—The body was emaciated, while the right arm and forearm were very œdematous. The skin over the tumor, which was the size of half a cocoa nut, was of natural color, and no dilated veins were anywhere noticed. The external edge of the right scapula was raised from its proper position by the tumor. By firm pressure near the anterior margin of the axilla, the ends of the second and third ribs were felt projecting as if broken off.

The right pleural sac was found to contain much serum. The lung bulged forward, and it was seen that two thirds of the lung superiorly had been transformed into an encephaloid mass, which, from its intimate union with surrounding parts, it was impossible to remove from the body without disruption. The external tumor was ascertained to be formed by an extension of this mass, into which portions of the first, second, third, and fourth ribs had been, as it were, fused. The ends of the ribs, both anteriorly and posteriorly, were jagged at the points of severance, and irregular with regard to each other. The posterior end of the third rib in particular was not more than two inches from the spinal column.

The cancerous mass was white and pultaceous, breaking down very easily on handling. Under the microscope it was found to be mainly composed of small nucleated cells. It is worth notice that, while examination of the sputa during life yielded cells of the same character, they were considerably larger in size and their contents were of a darker color, a circumstance probably to be attributed to the passage of the cells from the more saline fluid of the cancerous mass into the less saline fluid of the bronchial tubes. In the left lung nothing abnormal was discovered with the exception of a single deposit of a chalk-like substance, the size of a pea, on the external part of its inferior lobe. The heart, kidneys and the liver were normal, and no cancerous glands could be discovered.

Remarks.—The progress of the malignant growth was rapid, although intermittent. This was shown by the increased breadth of the zone on the anterior part of the chest, marked by dulness on percussion, and absence of breath sounds, and also by the enlargement of the tumor. In six days from the patient's admission this zone progressed from the lower edge of the second to the lower edge of the third rib. No progress was then made in this direction for several days, after which the growth was again active. Œdema of the right arm was plainly caused by obstruction of the axillary veins by the tumor. Pain was not an urgent symptom, but this is not unusual in visceral cancer. The absence of glandular enlargement and of dilated veins is worthy of notice. In some of its features, such as emaciation, night sweats and hæmoptysis, the case resembled phthisis. But the rapid infiltration of the lung, the pain, the side upon which the disease was developed—since cancer attacks the right more frequently than the left lung*—and above all the tumor, pointed to malignant disease.—*The Medical Press and Circular.*

DISLOCATION OF HIP JOINT OF NINETY DAYS STANDING, SUCCESSFULLY REDUCED. By Dr. H. H. KIMBALL, Minneapolis, Minn.—A young girl of ten years, residing about ten miles in the country, was brought into town May 25th, to receive treatment for what her parents supposed to be disease of knee and hip joints. The following morning I was consulted. Patient complained of lameness and soreness of the joints, and impaired mobility of same. After close interrogation, I learned from the child's parents that on March 2d she fell upon the ice, striking upon her right side. The injury and shock at the time were considerable, consequently the patient was put to bed and the proper treatment for swelling and soreness instituted. She lay for some time without much improvement, but in April she was allowed to move about, although doing so with difficulty. Notwithstanding the characteristic deformity, the pain upon motion, the want of corresponding symmetry in the hips, her medical and domestic attendants failed to discover the true difficulty. After my interview with patient and parents, I called the attention of my partner, Dr. Goodrich, to the symptoms of dislocation, and he at once agreed with me in my diagnosis. As soon as the fact was made known to the family, the question came from the anxious parents, "what can be done?" Considering this one of the cases where a conscientious surgeon cannot withhold that interference which gives his patient the only possible chance for recovery, I promised to make an attempt to reduce the luxation.

Saturday, May 28th, was appointed for the operation. I invited Drs. Goodrich, Hill and Lindley, of this place, to witness the trial. As soon as the patient was completely etherized, I proceeded to manipulate, adopting the usual method for this kind of luxation, the head of the bone being in the thyroid foramen.

The main point of interest in this case is the length of time that the dislocation had existed prior to reduction; the query naturally follows, whether or no the acetabulum is so filled that there will hereafter occur spontaneous luxation?

The patient is still at rest and doing well. The joint is movable and symmetrical.—*The Northwestern Medical and Surgical Journal.*

We have no doubt the case in question was one of coxo-femoral articulation—but we regret that the report is not more full in the description of the case, the details of the operation, and the appearance of the parts after the reduction.

DOUBLE VAGINA. By J. C. DAVIS, M.D., Fort Atkinson, Jefferson county, Wis.—Miss E., of Rock county, in this State, aged twenty-one years, of medium size, and apparently of a good constitution, called at my office to consult me in regard to her health, which she stated had been failing for the past two years, in consequence of having taken cold during menstruation, which brought on prolapsus uteri, as she had been informed. But upon examination per vaginam, I found it to be retroversion of the uterus; and when attempting to replace the same, I discovered a septum commencing at the mesial line (in a line from right to left), attached to meatus urinarius, and extending laterally and posteriorly two-thirds of the way to the fourchette, and within the vulva and hymen.

The external genital organs are well developed. The mons veneris well covered with hair. The labia majora and minora are perfect.

The internal attachment commenced within that of vagina to uterus, and extended half around to anterior and posterior mesial line, thence by its edges to anterior and posterior vaginal walls, leaving the os uteri in the right vagina (or vagina proper), which is of normal size, shape and capacity.—*Chicago Med. Journal.*

THE council of the Royal College of Surgeons, London, has decided to receive certificates of professional education for the fellowship and membership of the college, from the Harvard Medical School, and the Medical Schools in New York and Philadelphia.

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* Intra-thoracic Cancer. By J. Cockle, M.D. Churchill, 1865. Page 68.

Medical Miscellany.

Deaths from Chloroform.—Mr. William W. Leonard, a young merchant of Lake Street, Chicago, died in that city recently from the effects of chloroform which was administered by Dr. Beebe, for the purpose of removing a cystic tumor over the left eye of the deceased. The operation was nearly completed, when Mr. Leonard suddenly threw back his head, his neck became stiff, and he gasped. Efforts were made to restore him, but without avail. In half an hour he was dead. A coroner's inquest brought in a verdict of death from paralysis of the heart, produced by the inhalation of chloroform.—*Boston Daily Transcript.*

A case of death from chloroform is reported from Liverpool. The patient, a man of 42, was admitted into the Royal Infirmary, suffering from disease of the right foot. An operation was deemed necessary, and chloroform was being administered, when he sank rapidly and died in a few minutes. The *post mortem* revealed diseased heart and kidneys.—*Lond. Med. Times and Gazette.*

Relief to the Sick and Wounded.—A meeting was held on Thursday afternoon, Aug. 4, at Willis's Rooms, under the presidency of the Duke of Manchester, for the purpose of organizing a society for the relief of the sick and wounded of all nations in war, similar in principle to the American Sanitary Commission. The meeting was addressed by the Earl of Shaftesbury, Field-Marshal Sir J. Burgoyne, Colonel Loyd-Lindsay, Sir H. Verney, Lord Eliot, Monsignore Capel, Dr. Pollock, Dr. Mayo, Captain Galton, Captain Burgess, and others. Resolutions were passed establishing a central committee in connection with the conference of Geneva, and adopting the badge and flag of the international society, which has its headquarters there. It was determined to lose no time in ascertaining the mode in which personal and material assistance could be most acceptably rendered to both sides.—*Ibid.*

A strange case of hydrophobia is reported in one of the Sheffield papers. Last week two children were sleeping in a field, when a donkey, which had been grazing in the same enclosure, seized one of them by the leg, shook it savagely, and then carried the little creature several yards. So severely was the leg lacerated that the child was taken to the hospital, where convulsions quickly supervened and death put an end to its sufferings. The house-surgeon, Mr. Algernon Taylor, gave it as his opinion that the donkey must previously have been bitten by a mad dog. The verdict was death from hydrophobia.—*Dublin Medical Press and Circular*, Aug. 10.

Healing Wounds by Transplantation.—We have authority for announcing that Professor Frank H. Hamilton has already tested the method of healing denuded surfaces by transplanting a small piece of skin from elsewhere, in more than thirty cases at Charity Hospital, varying the operation in many ways, with the view of determining which may be the best method of performing it. Of course, it is too soon to speak confidently of the results as yet; but we are at liberty to state that two of the cases may even now be pronounced undoubted successes.—*N. Y. Med. Gaz.*

Detection of Logwood in Wine.—M. Lapeymere, having observed that hæmatine, the coloring principle of logwood, gives a sky-blue color in the presence of salts of copper, proposes the following test for logwood in wines:—Paper is saturated with a strong solution of neutral acetate of copper, and dried. A strip of this is dipped into the suspected liquor, and, after removal, the adhering drops are made to move to and fro over the paper, which is finally to be carefully dried. If the wine contain logwood, the paper will assume a violet-blue color. On the contrary, if the wine possess its natural coloring matter, the paper will have a gray tint.—*Jour. de Pharm. et Chim.*

A marble bust of the late Maurice H. Collis, M.D., has been placed in the Meath Hospital, Dublin, of which institution he was one of the Surgeons.—*Canada Medical Journal.*

The American Pharmaceutical Association holds its 18th annual meeting at Baltimore on the second Tuesday (the 13th day) of September.

To Correspondents.—Communications accepted:—Case of Locomotor Ataxy—Rational Medicine in England—Spontaneous Dislocation of Femur; Reduction after several Months.

Married,—In Paris, France, 17th ult., Dr. Frank Wells, of Boston, to Miss Gertrude Huidekoper, of Meadville, Pa.

Deaths in fifteen Cities and Towns of Massachusetts for the week ending Sept. 3, 1870.

Cities and towns.	Total.	Prevalent Diseases Cholera Infantum.	Consumption.	Dysentery & Diarrhœa.	Typhoid Fever
Boston . . .	136	40	14	13	9
Charlestown	24	10	1	1	1
Worcester .	14	4	3	0	0
Lowell . . .	22	4	4	1	1
Milford	9	0	1	0	2
Chelsea . . .	3	1	0	0	0
Salem . . .	14	3	3	2	1
Lawrence . .	9	1	3	0	2
Springfield . .	5	0	0	0	1
Lynn	12	5	2	0	1
Fitchburg . .	9	1	0	1	1
Taunton . . .	6	0	4	0	0
Newburyport	5	0	1	1	0
Somerville . .	9	2	1	0	0
Haverhill . .	16	4	3	3	0
	293	75	40	22	19

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Sept. 3d, 136. Males, 69; females, 67. Accident, 5—apoplexy, 1—disease of the bowels, 2—congestion of the brain, 1—disease of the brain, 2—bronchitis, 2—cancer, 1—carbuncle, 1—cholera infantum, 40—consumption, 14—convulsions, 3—croup, 2—cyanosis, 1—debility, 2—diarrhœa, 11—dropsy of the brain, 3—dysentery, 2—erysipelas, 1—scarlet fever, 3—typhoid fever, 9—hæmorrhage, 3—disease of the liver, 1—congestion of the lungs, 2—inflammation of the lungs, 3—marasmus, 4—meningitis, 1—old age, 3—premature birth, 2—scrofula, 1—teething, 1—unknown, 8—whooping cough, 1.

Under 5 years of age, 87—between 5 and 20 years, 5—between 20 and 40 years, 13—between 40 and 60 years, 17—above 60 years, 14. Born in the United States, 99—Ireland, 26—other places, 11.

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Original Communications.

APHASIA, AND THE PHYSIOLOGY OF SPEECH.

(Continued from page 152.)

Part II.

A general survey of the anatomy and physiology, not only of the brain, but of the spinal cord, is necessary before the nature of speech can be rightly understood. As this paper is only a record of a brief course of reading, a general knowledge of the subject must be assumed, and only a review of the most important facts attempted. Many of these facts have been taken at second hand from the convenient summaries of Griesinger (Mental Diseases, New Syd. Society, 1867), Jaccoud (Les Paraplegies et l'Ataxie du Movement), and Marshall (Outlines of Physiology, 1869).

Anatomical View.—The *spinal cord*, instead of being simply a conductor of nervous impressions, is an important centre of nervous action. A single bundle of fibres only ascends directly from the posterior roots of the spinal nerves to the encephalon. All other fibres, both anterior and posterior, spring from or enter the cells of the cord. It is now admitted that all nerve cells are multipolar, having prolongations which are either continuous with nerve fibres or with those of other cells. In the cord the cells are large and are grouped into four primary divisions on each side. Van der Kolk has traced these groups throughout the whole length of the cord, and has designated them as follows, viz. :—the column of the anterior cornu, the lateral column, the column of the gray commissure, and the column of the posterior cornu. Twelve subordinate divisions may be distinguished on each side.

The distribution of the fibres of the spinal nerves, according to Wagner and Van der Kolk, is as follows. The anterior fibres all end in the cells of the anterior cornu of the same side. These cells have transverse prolongations which unite them to the corresponding groups on the other side. They have also encephalic fibres which form the anterior and lateral columns, and do not decussate in their upward course in the cord. The posterior fibres are of two kinds—cerebral and reflex. Of the former, a part ascend directly to the brain and a part enter the cells of the posterior cornu. These cells are prolonged into fibres which ascend in part on the same, and in part on the opposite side of the cord. The reflex fibres pass forwards through the grey substance, either terminating in the groups of cells or going out by the anterior roots. The cells of the posterior cornu are united by transverse prolongations, forming a posterior gray commissure.

The functions of the cord, based on these facts and the researches of Charles Bell, Magendie, Claude Bernard, Schiff, Brown-Séquard and others, are briefly as follows. The anterior columns, white and grey, conduct voluntary motor impressions. The grey columns bear the chief part in this transmission, their action being quite perfect without the white columns, while the latter, when isolated, have but a limited action. There are no responsive motions to direct excitation of the white or grey anterior columns, the anterior roots alone exhibiting this phenomenon. The posterior columns, grey and white, conduct sensory impressions to the brain, having both a direct and a crossed action. The grey columns transmit painful sensations and the white tactile sensations, the latter function being also shared by the grey substance. The posterior columns have a powerful indirect influence upon motion, since they regulate muscular coördination through the information they transmit respecting the position of the parts to be moved. The lateral column, which only becomes distinct and separate in the upper part of the dorsal region, has a special control over the respiratory function. The sensitiveness of the posterior columns depends on the direct fibres of the posterior roots.

The spinal cord must be regarded as a centre capable of independent action, possessing the power, through the arrangement of its cells and fibres, of producing motion in response to excitation, and of associating the actions of different muscles for some common end. These functions are subject to voluntary control only in a general way. In the case of reflex action, we may suppose, for the sake of illustration, that each group of cells has its sensory, voluntary and motor fibres, the action of the voluntary fibres usually predominating. When their action is annulled by section, disease, anæsthesia, or by exhaustion, as after resisting for a time continued tickling, the sensory impression eventuates in motion after its own method.

Respecting the coördination of movements, we must suppose organized groups of cells, corresponding in their connections to the combined muscular acts to be executed. These groups are called into action by a much smaller number of voluntary fibres than are requisite to operate upon the muscles themselves, as is partly demonstrated by the small size of the cord, when compared with the aggregate bulk of the spinal nerves. We are also conscious of our inability to call the muscles into isolated action by an effort of will, the mind only containing an idea of the combined result to be effected. That the action of the cord in this respect is independent, is shown by the frequency of automatic movements throughout the whole range of its possibilities. In such case it is probable the sensory information received through the posterior roots is sufficient to direct its operations in the absence of any but the most general and infrequent voluntary guidance.

The medulla is an expansion of the cord, with an elaboration of arrangement in its elements corresponding to the increasing complexity of its functions. The grey matter of the cord may be traced to the ganglia of the olivary and restiform bodies and to the corpus rhomboideum of the cerebellum. It passes forwards through the crura cerebri and joins the corpora quadrigemina, the optic thalamus and the corpora striata. At the substantia perforata it approaches the convolutions, but is separated from them by the interposition of the white fibrous tract.

The white substance of the cord may be traced by its posterior columns into the cerebellum and optic thalami, and by its anterior columns through the pons into the corpora striata. Part of the anterior pyramids and the deeper portions of the lateral columns decussate just below the medulla. The complex rearrangement of the white and vesicular matter of the cord in the medulla has been almost exhaustively described by J. Lockhart Clarke (Researches on the intimate Structure of the Brain, 2d series, Phil. Trans., Part I., 1868). We may, however, suppose a general similarity of function in parts so nearly allied. The cranium is but a group of modified vertebræ, and the cranial nerves are analogous to the spinal; and since the former find their nuclei in the cell groups of the medulla, we may fairly expect to find here the same reflex and coördinating powers as in the cord below, but presiding over new regions of distribution. This view seems to be well supported by observation and experiment.

The basic ganglia, including the pons, cerebellum, corpora quadrigemina, corpora striata and optic thalami also seem to constitute centres of action analogous to those in the medulla and cord. It is believed by some quite recent authorities, though it is of course difficult of demonstration, that the fibres of the cord end in these ganglia and are not directly continuous with the radiating fibres of the cerebrum. Carpenter says :—" It is a point especially worthy of note that no sensory fibres terminate directly in the cerebrum, nor do any motor nerves issue from it. * * * And we shall find strong physiological as well as anatomical ground for belief that the cerebrum has no communication with the external world otherwise than by its connection with the sensori-motor apparatus." (Physiology, 7th ed., 1869, p. 515.)

The pons has a complex structure and seems to be an important centre of action. On irritation, epileptiform convulsions are produced. H. Nothangel thinks he has proved the centre of general convulsions to be located in the pons, and explains the spasms following injury to the floor of the fourth ventricle by reflex action. (Med. Record, Oct. 1, 1869.) The cerebellum has of late been regarded as a coördinating centre for general muscular movements. If so, it is probably also the seat of the necessary guiding sensations, whether derived from the nerves of muscular sense or otherwise. This view is corroborated, according to Carpenter, by the " marked structural connection which exists between the cerebellum and optic ganglia, by which the visual sense is called in to aid in the direction of certain movements." (Physiol., 7th ed., 1869, p. 624.) Van der Kolk, however, denies the possibility of this view, and believes all harmonized movement to be due to organized groups of cells in the cord.

The basic ganglia, taken together, have been supposed to constitute a sensori-motor system, receiving impressions from the cord, the nerves of special sense, and from that "organ of internal sense," as Reil has called the cerebrum, and reacting upon them. This reaction is both downwards upon or through the cell groups of the medulla, and upwards upon the convolutions. It would seem reasonable to assign to these ganglia both reflex and coördinating functions, modified to meet new necessities and by the special character of the stimulus received. There is reason to doubt, however, the complete interruption of fibres of which Carpenter speaks, in view of later opinions and researches which will be presently mentioned.

The Cerebral Hemispheres, exclusive of the basic ganglia, form a centre not directly essential to animal life, but devoted to a still higher class of functions. The experiments of Louget, Dalton and others, show that in pigeons, all the movements of animal life may continue after their removal, the intelligence which usually directs them alone being wanting. The minute anatomy of the hemispheres furnishes a few hints as to their functions.

According to Griesinger the following systems of fibres have thus far been distinguished. (1.) The corona radiata. This is not simply a prolongation of parts of the medulla, as is evident from its greatly preponderating size. Its fibres radiate to the summits of the convolutions, and are most marked posteriorly. (2.) The expansion of the corpus callosum. It seems to be formed by those fibres of the corona which cross in passing to the opposite hemispheres. These fibres proceed chiefly to the inner and superior convolutions. (3.) The fibres of the anterior commissure. A part of these suddenly terminate in the inferior gyri of the middle lobe, and a part enter the posterior lobe to be distributed to the whole extent of the superior part of the hemisphere. (4.) The expansion of the nerves of sense, particularly of the optic nerve. A fan-formed expansion can be distinguished passing from the optic tract to the summit of the posterior lobes, and other radiations to the anterior lobes. There appears also to exist, both in the cerebrum and cerebellum, an expansion of the auditory nerve, derived from the posterior columns. (5.) Special systems of fibres pass from one convolution to another, and line the internal aspect of the cortical substance. Arciform fibres connect different parts of the same hemisphere.

For the most recent researches upon cerebral anatomy the reader is referred to a paper on the "Structure of the Cerebral Hemispheres, by W. H. Broadbent, M.D." (Jour. Med. Science, April, 1870.) It gives the results of careful and minute dissections by the author, which have been reported in detail to the Royal Society. This writer thinks he has demonstrated that fibres from the crura cerebri *do* pass uninterruptedly to the convolutions. Of the general plan of construction of the hemispheres he says, "The central fibres, including under this term the fibres of both crus and central ganglia (corona radiata) spreading out, are distributed to the convolutions along certain main lines, or at certain points. They do not, as has usually been assumed, and as is expressly stated by Gratiolet, enter each convolution, and form an axial plain connecting the summit of the convolution with the crus. On the contrary, there are entensive tracts of convolutions which receive no central fibres at all." He further states that the fibres of the corpus callosum have their line of origin or termination in common with those of the central fibres. The tracts above mentioned are also connected with these main lines by fibres, and with each other by lines of fibres running for the most part longitudinally in the brain. The fibres connecting one gyrus with another even, do not pass transversely under the sulci, but run longitudinally in the convolutions.

The cortical substance everywhere presents a stratified structure consisting of layers alternately light and dark, varying in number from four to eight. The color depends on the greater or less amount of vesicular matter. The minute structure of these layers also varies in different localities. It is in general composed of white fibres, with very fine subdivisions of peculiar granules in connection with the termination of these fibres, of ganglionic cells, whose prolongations are continuous in part with fibres, and in part with granules, and of an homogeneous tissue in which these elements are suspended. Griesinger, after summing up the conclusions of recent German authorities, says, "The relatively little which we as yet know of the intimate structure of the grey substance permits us to suppose, not only very great differences in the phenomena of this extremely delicate apparatus, but also that these phenomena are essentially different in the various parts of the brain."

The nerve cells themselves vary in shape. This is best observed in the posterior lobes, where exists an apparatus delicate and complex beyond description. The cells oval, fusiform, angular, or pyriform, with their connecting fibres, are so disposed as to give evidence of the highest elaboration of function. Virchow compares these characteristic apparatuses to the layers of the retina. (Cell. Path., Lect. xii., p. 301.) Maudsley, in commenting on Lockhart Clarke's description of them, says: "the general result of research is the fact, that an infinite number of communications exist, in all directions, between an infinite multitude of cells of all varieties of shape. (Physiol. and Pathol. of Mind, p. 55.)

Van der Kolk states, as the result of his long and patient investigations, that wherever there are differences of function, differences of structure and relation exist: "Microscopical investigation has established this in the completest manner." (Die Pathol. und Therap. &c. 1863.) We may still look to find in the convolutions, modes of nervous action similar to those seen elsewhere. The phenomena of nervous stimulation and discharge, depending on molecular changes in the nerve cells and fibres, and requiring constant reintregation from the blood, must be universal throughout the nervous system. Special arrangements of cells and fibres, either congenital or organized by growth in accordance with individual education and experience, modify these phenomena in various ways. For an analysis of the modes of nervous action, considered as changes of isomeric condition, the reader is referred to Spencer's Principles of Psychology.

Diagrammatic View.—The nervous apparatus may be divided for purposes of description into four sections or spheres of action, which, although somewhat arbitrary and artificial, will prove convenient for temporary use. In his late work on the Mind, which is an elaborate attempt to remove psychology from a metaphysical to a physiological basis, Maudsley designates them as follows—viz.: Primary, or Ideational, Sensori-Motor, Reflex and Organic. Their inter-relations are complex and obscure, but they show an increasing elaboration of function from the lowest to the highest. Each section has its independent mode of action, but is subordinate to the one next above it.

The Organic Centres, for instance, have an independent action originating in the sympathetic ganglia. Of this action little need be said in this connection. Jaccoud considers the connection of the sympathetic ganglia with the cord to be the fundamental fact, and spinal action to be predominant. The operations of the organic centres are carried on to a great extent outside the spheres of consciousness and observation. Their functions, though comparatively simple, powerfully affect and are powerfully affected by the higher centres.

The Tertiary Centres are concerned in reflex action. Here originate those motor impulses, which respond directly to excitation. In man they are for the most part primarily under voluntary control, and are only secondarily automatic. The vague alternate movements of the infant's limbs, acquire precision only by long experience and continued practice. When once the plan of coördinate action is organized in cord or medulla, the process of education passes out of memory, and the acquired movements are unconsciously and involuntarily performed. Examples of secondary automatic action make up a large portion of our daily life. This independent action of the tertiary centres, is subject at any moment to the control of the centres next above. A residual impulse ascends to the sensorium, and acts as a guiding sensation.

The Secondary Centres are Sensori-motor, movement responding to sensation instead of impressions. Such movement differs from reflex action mainly in the character of the stimulus. The sensations derived from the sources previously mentioned are of great variety and complexity, and are subject to certain laws of association, and to organic growth and decay. For a classification and analysis of them the reader is referred to Bain's remarks on Movement, Sense, and Instinct. (Mental and Moral Science, Book I., chap. ii.)

Sensori-motor action may be involuntary, as seen in the effects of a strong light, a pungent odor or taste, a sudden sound, and in the phenomena of coughing, sneezing, and the like. It may also be unconsciously performed, the mind taking no note of the guiding sensation. Dancing, marching to music, singing, speech, as well as most of the locomotor and manipulatory acts, may be carried on independently of the will or consciousness. The phenomena of somnambulism, hypnotism, and insanity, furnish abundant proof of the extent to which automatic action may go, when the suprasensory centres are asleep, or pre-occupied; and each one is aware in his own experience of the prevalence of such action under less abnormal conditions.

The Primary or Ideational Centres are brought into relation with the outer world, on the receptive side, through the medium of the sensorium. These centres are referred by general consent to the cerebral convolutions. Here, as we have seen, are nerve cells and fibres, arranged with a view to the most delicate and complicated functions. Layers of cells, with anastomosing processes, form local organic groups connected by commissural fibres one with another, and composing an apparatus, bearing evidence of profound design. We cannot doubt that the laws of nervous action apply here as elsewhere. *Natura nihil agit frustra.* We have in fact an *idealorium*, capable of education through sensory channels. Simple ideas here become established, grouped and associated, in great variety, according to individual experience and capacity, just as similar processes occur in relation to sensations and movements in the lower centres.

Ideo-motor action may be involuntary—a sudden thought exciting instant reaction. A blush, the start from sudden fright, or laughter from a sudden sense of the ludicrous, are examples. It may be unconscious, the train of ideas following certain laws of association, and producing certain results which the mind perceives, without having been aware of the process. The best results of ideation are of this spontaneous and automatic character. Self-consciousness often serves to retard or interrupt mental operations.

As there is no higher centre to which the residual impulse can ascend, from the ideatorium it seems to expend itself, not in immediate motor reaction, but in a transference from cell to cell along accustomed paths, subject to constant modification, and effecting changes in its course, until extinguished. By the changes it effects in the cell elements, on its way, it seems to be storing up the material of future reaction. Some such process may be supposed essential to deliberate thought. The higher its development, the less immediate and energetic its final reaction. A too nice balancing of reasons prevents decision, just as a too active consciousness interferes with the free flow of thought.

When we consider the mind on its reactive side we perceive that co-ordinate motion is effected by means of stimuli from any of the centres above described. There is no necessity for supposing distinct centres for each mode of stimulation when one centre of coördination may respond to each stimulus in turn. This is further shown by the fact that the will can only control, and the mind is only conscious of movement in the mass, having no immediate connection with the action of individual muscles. Ideation deals with movements as with sensations only in the abstract. There is then a region of actuation, a *motorium commune*, containing the organized residua of all past actions and ready to respond to adequate stimulus from any direction. Van der Kolk, and Jaccoud following him, find this region in the cord and medulla, and Spencer discovers a direct relation throughout the animal kingdom, between the amount and complexity of movement, and the size of the ganglionic masses.

Perhaps too much space has been given to preliminary considerations, but it seems important to have in the mind some ideas of the general plan of cerebro-spinal action, before attempting to refer so important a function as speech to its proper position. I can only advise a thorough perusal of the works to which reference has been made, to fill up the meagre outline given here.

The Nervous Mechanism of Speech.—Articulate speech requires a regulated respiration and phonation, with various lingual, labial and buccal changes, affecting the shape and size of the oral cavity. In vocalization a control of the respiratory function is assumed through the ordinary muscles of respiration. The pneumogastric, according to Cl. Bernard, is a mixed nerve. It has motor filaments of its own, which with the spinal nerves are concerned in the passive respiration. The spinal accessory, on the contrary, has for its special function, the adaptation of the respiratory movements to the necessities of animal life, such as the production of voice and general muscular effort.

The intimate anastomoses of these nerves from their origin, renders an authoritative discrimination of their functions difficult. Carpenter thinks the degree of inosculation varies in different races, and even in different individuals. Willis regards the external branch of the spinal accessory as made up from the cervical roots. Cl. Bernard coincides in this opinion, and believes it entirely independent of the internal branch, which he calls the special nerve of phonation. Hirschfeldt has always found an intimate inosculation between these branches, and believes Bernard to have described as normal what can only be a rare exception.

However composed, the external branch has to do chiefly with voluntary respiration, and the internal, which accompanies the pneumogastric, is concerned in the muscular movements of the pharynx and larynx. The spinal accessory, then, by its external branch, presides over those respiratory movements necessary to phonation, and by its internal over the tension of the vocal cords and the size of the glottis.

Articulation requires a modification of the sound produced in the larynx, the importance of which will be seen when one considers that the laryngeal voice is not essential to perfect articulation. Aspirated speech is adequate to the expression of ideas, and may be artificially produced by means of a current of air blown through the nostrils into the fauces, the glottis remaining closed (Carpenter's Physiology, p. 728). A gentleman of this city is now able to make long conversations, perfectly intelligible to those around him, by use of the muscular apparatus of articulation alone, the larynx being closed by disease, his breathing being entirely dependent upon a tube in the trachea.

Vowels are produced by certain changes in the oral cavity, the sound being uninterrupted, while consonants require various interferences with the vocal current. These changes are brought about by the combined action of the velum palati, cheeks, tongue, lips and teeth. The nerves on which these movements depend are distributed as follows: the spinal accessory to the pharynx, the hypo-glossal to the tongue, the facial to the cheeks and lips, and the motor branch of the trifacial to the levators of the lower jaw. The afferent nerves corresponding to these efferent, and analogous to the posterior roots of the spinal nerves, are, according to Carpenter, as follows: the motor branch of the fifth, to which should be added *all* the motor oculi nerves, constitutes with its sensory division the first pair of true intervertebral nerves. The facial and glosso-pharyngeal form the second pair, the spinal accessory and pneumogastric the third. The hypo-glossal may be regarded as the first of the spinal nerves.

The apparent origin of the nerves essential to perfect speech is in the medulla. The deep origin of their fibres is more difficult of demonstration. They may all be traced, by some fibres at least, to the floor of the fourth ventricle. Lockhart Clarke states that some fibres of the spinal accessory arise from the nuclei common to it and the pneumogastric, and others from the lateral grey matter and anterior cornu. The hypoglossal has a like double origin, the upper roots arising from a special nucleus and the lower from the upper part of the anterior cornu. The nuclei of the spinal accessory and hypo-glossal are in communication by fine nervous filaments. The facial nerve forms a horizontal loop in the medulla with the sixth. The sensory division of the fifth communicates with the pneumogastric and the glosso-pharyngeal in the gray tubercle, descending through the whole length of the medulla. (Phil. Trans., 1868, Part I.)

Van der Kolk, as well as Clarke, believes the olivary bodies to be coördinating centres for the cranial nerves and centres of reflex action also induced by sudden impressions on the nerves of special sense. He believes them to be concerned in the coördination of speech from their connection by transverse fibres with the nucleus of the hypo-glossal, and from the not infrequent occurrence of disease in them, accompanied by defective articulation.

[To be concluded.]

RESULTS OF THIRTEEN PASSAVANT'S OPERATIONS FOR BREAKING UP ATTACHMENTS OF THE IRIS TO THE CAPSULE OF THE LENS.

Read before the Suffolk District Medical Society, by B. Joy Jeffries, M.D., Boston.

Dr. Passavant published an account of his operation in the "Archiv für Ophthalmologie," 1869. This article I translated for the Boston Medical and Surgical Journal (Dec. 23, 1869), and would refer to it in explanation of the object, method and success of this operation as given by its originator.

Since March 1, 1870, I have performed Passavant's operation thirteen times all told, on four several eyes in three patients, as follows:—N. B., a woman æt. 22, has had severe specific iritis in the left eye, the sequelæ of which are, several strong posterior synechiæ, which atropine and the continued specific constitutional treatment have not broken up. (Fig. 1.) The pupil is also covered by a film of deposit, much reducing vision and obscuring an ophthalmoscopic examination. The Passavant operations were as follows:—

Fig. 1.

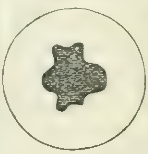

Fig. 1.—Pupil of left eye dilated by atropine, showing the attachments of the iris to the capsule of the lens. The film in the pupil is not shown.

March 16, '70, upwards and outwards.
March 22, '70, upwards and outwards on same synechia.
March 25, '70, downwards and inwards.
March 29, '70, downwards. Two were broken away.
April 2, '70, upwards and inwards.
April 7, '70, upwards.

April 15, '70, upwards and out, where the first two were done, as the iris seemed to be fastened down quite to its insertion, and the corneal opening was made far back, in order to be able to pull on the iris as near its periphery as possible. From this cut some blood flowed into the anterior chamber, obscuring a distinct view and thus preventing a second application of the forceps. In two days the blood was gone, and the pupil round under atropine. May 4, 1870, the patient was discharged from operative treatment, the pupil freely movable, but varying a little from a circle up and out, where three attempts had been made to entirely remove attachments. (Fig. 2.) This synechia was broken *twice*, so far as the iris could be pulled. Whether the iris does not here contract from exudation in its tissue, or is fastened down, I cannot decide. I judge, however, the latter, as the rest of it responds readily to light. The pupil now is much clearer and the fundus well seen with the ophthalmoscope. Vision, of course, correspondingly improved. No specific affection of the retina or choroid was noticed. The eye looks almost the same as the other, and is greatly improved in appearance. The three punctures of the cornea, so close together, have left a slight cicatrix, which will probably disappear, or if not, is of no consequence cosmetically. The spots of pigment now seen on the capsule show where the synechiæ were. There is no film over the pupil, and it is a question whether the breaking away of the synechiæ by removing the connection of the deposit on the capsule in the pupil from the iris, did not hasten or facilitate its absorption. My own feeling was, that such a number of synechiæ and amount of lymph in the pupil would have ruined the eye, as I should have looked to the pupillary membrane becoming further organized.

FIG. 2.

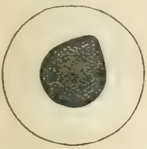

FIG. 2.—Shows the results of the operations. The pupil still drawn a little up and out.

M. N. C., a woman æt. 38, has had severe specific iritis in both eyes, and, as sequelæ, a single synechia downward in the left eye, whilst in the right there are several, some broader, others quite delicate, close together. (Figs. 3 and 4.) Continued atropine and constitutional treatment have failed to break these attachments, which do not show themselves in the right eye except under atropine. I did five Passavant's operations on the two eyes as follows:—March 25, 1870, on the left eye downwards, clearing the pupillary edge completely.

On the right eye, April 19, 1870, downwards, two were broken.

April 22, 1870, up and inwards.

April 26, 1870, down and outwards.

FIG. 3.

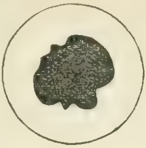

FIG. 3.—Right pupil dilated by atropine, showing the posterior synechiæ.

FIG. 4.

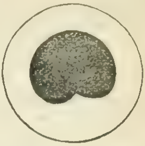

FIG. 4.—Left pupil dilated by atropine, showing posterior synechia.

Although I anticipated being obliged to perform at least four operations on this the right eye, these three sufficed to free the iris completely, two synechiæ being broken away together by opening the forceps wide enough to embrace them at once. May 4, 1870, the effect of the atropine has disappeared. Both pupils are perfectly round and movable, responding to light and shade. The patient continues under constitutional treatment for other signs of syphilis. All the synechiæ in this case gave way readily and no blood entered the anterior chamber, as I did not have to pull the iris except at its pupillary edge, and so did not require my corneal cut to be where bloodvessels would be touched by the lance-shaped knife.

E. B., a woman æt. 25, has had severe specific iritis in the left eye, which, having run its course, has left a posterior synechia downward that atropine and constitutional treatment do not break. (Fig. 5.) May 18, 1870, I broke this by Passavant's operation, and the pupil became round and movable. The patient continues under constitutional treatment for syphilis.

FIG. 5.

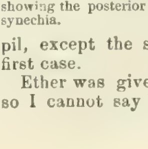

FIG. 5.—Left pupil dilated by atropine, showing the posterior synechia.

It will thus be noticed that the operations cleared the iris from the lens completely, leaving a round and movable pupil, except the single attachment in the first case.

Ether was given in all these operations, so I cannot say how painful it would be without.[*] Pain occurred subsequently in but one case, perhaps from the dragging of the iris or the presence of blood in the anterior chamber.

Outside of its very great necessity and importance to the ophthalmic surgeon, I think other physicians and surgeons will be interested to learn how the eye tolerates such operative interference. Seven operations on a single eye is a larger number than I at present know of having been done. My results certainly justified them. I need not dwell on the effect of attachments of the iris to the capsule; continued observation has shown that they are the fruitful source of recurrent iritis. We have always felt dissatisfied in seeing them left after iritis, now we have a safe and reliable means of breaking them away by grasping them with delicate forceps. I use a pair of moderately curved iris forceps, the teeth of which have been ground off and the points serrated. The more delicate their spring, the less liable are we to prick the iris too hard. Flowing off of the aqueous humor does not interfere, as the ends of the forceps are rounded, and can be pushed between the iris and cornea without danger. I have so far found this operation unexpectedly easy, and certainly most satisfactory in result. Iritis having just run its course, would naturally seem to contraindicate operative interference, but experience has so far shown differently. Other cases now under my care will, I trust, also prove this to be true.

Bibliographical Notices.

Modern Medicine; its Need and its Tendency. The Annual Discourse before the Massachusetts Medical Society, May 25th, 1870. By William W. Wellington, M.D., of Cambridgeport. Medical Communications of the Massachusetts Medical Society. Vol. XI. Art. IV. Pp. 133–172.

It is apparent from even a hasty examination of this discourse that, in this instance at least, the Society's vote of thanks was no formal or matter-of-course compliment. As this vote expressed it, it is an "able, instructive, and highly interesting Discourse." It is well written and scholarly. It neatly developes and fully sustains its theme throughout. Touching upon, or referring to, the latest advances in science and medicine, it may indeed instruct the most laborious and best informed; it will force many a suggestive thought upon all, even upon those who run while they read; and whoever begins its perusal will pursue it with unabating interest to the end.

The Discourse opens with an allusion to the various subjects and departments of knowledge which the spirit of inquiry, so searching in these days, has unsparingly invaded — to their establishment or discomfiture; and follows "this disposition to look *into* things instead of looking *at* them" in its influence on the science of medicine. Of medicine the speaker says: "It is probably, at the present day, passing through an ordeal more severe and searching than it has ever before experienced. The present period in its history, as Dr. Aitken has truly said, 'is one of *probation* as well as of *progress.*' While, on the one hand, it is enriched, as at no former time, by the contributions of scientific inquiry and observation, on the other, its theory and practice are subjected to a remorseless criticism, which must needs expose their deficiencies, and reveal their short-comings. Especially the action of drugs, and their influence on disease, are undergoing a scrutiny, which must eventuate in essential modifications of existing modes of treatment."

"It must be confessed," he continues, "that the manner in which the medical profession is regarded by the community at large is not such as in all respects to gratify our self-love, or to flatter our vanity."—(Pp. 135–136.)

This confession he illustrates by suitable quotations from eminent and influential authors, who nevertheless not unlikely, as particularly in the case of Mr. Prescott, the historian, were among those most indebted to the profession. Such ungracious statements, which might easily be multiplied, should put physicians on their guard not to give occasion for their utterance.

We may be justly surprised and sometimes inclined to resent such treatment from those who should, and undoubtedly do know better; let us then listen to the calmness and wisdom of the Discourse:

"It is well, however, in matters of this kind, to be governed by reason and not by feeling. It should be remembered that although the community, at times, seems disposed to undervalue our services, the medical profession proper has ever held, and still holds, a high place in the public regard, and that, in the long run, it is recognized as the true exponent of existing medical science. (P. 138.) * * *

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[*] Dr. Robert Amory, of Boston, reported to the "Society for the Promotion of Science in Medicine," the results of his experiments in reference to the use and purity of nitrous oxide gas. From his report I feel inclined to employ this as an anæsthetic in Passavant's operation whenever a favorable opportunity offers.

"But if, after a careful review of the facts in the case, the conclusion is forced upon us, that there is in the public mind a lurking doubt as to the efficacy of medical art, will it not be well to inquire whether after all there may not be some ground for such a doubt, and a real cause for the seeming want of confidence in our professional skill." (P. 139.)

Then after reviewing its various departments, and finding that "medicine as a whole can be shown to have kept pace with other branches of human inquiry," the conclusion is arrived at, that "the treatment of diseases, that part of it, especially, which relates to the administration of drugs, is not in a satisfactory condition, and is not creditable to the medical science of the nineteenth century." (P. 141.)

This is not owing, says the speaker, to omission in this direction, for "Physicians cannot justly be charged with having neglected to use medicines in sufficient quantity, or in a sufficient variety. The seventeen hundred closely printed pages of the United States Dispensatory, and the concurrent testimony of mankind, will triumphantly acquit them of any such charge." The blame must be ascribed in great part to the loose, sometimes careless or thoughtless, manner of administering drugs which has prevailed largely in times past, and is not obsolete even now.

"Is it an exaggeration to say that the want of clear and exact knowledge, which exists, even in our day, as to the effects of medicinal agents in the treatment of disease, is a great evil, which calls loudly for reform?"

Having further illustrated this point by showing the confusion in standard medical works, and the opposite methods in the treatment, of the mildest and the severest diseases, by the most eminent in the profession, the speaker announces the doctrine of the Discourse—that "the great NEED in medicine, at the present time, is clinical study;" and after defining and illustrating at length his ideas on this point, repeats, that "clinical research, then, particularly in relation to the effect of medication upon disease, is the chief NEED, and should be the special work of modern medicine"; stating emphatically that "*the efficacy of supposed remedies can only be tested by well-conducted investigations at the bed-side.*" This doctrine, none the less important because not absolutely new, is urged and enforced with much earnestness and original argument through many pages of the discourse. We would gladly reproduce the whole of it, but must content ourselves with rather liberal extracts:

"The fact is not fully realized, that clinical medicine is a distinct department of medical science, and not included in other departments; that it has its own special work, and its own way of doing this work."

* * * * * *

"The difficulties which attend the study of the treatment of disease are obvious. 1. The subject of our investigations is a living human being, placing himself under medical care to receive aid from the experience and acquisitions of the past, and not to be experimented on for the benefit of science or of posterity. 2. The doubt is ever present, whether improvement or recovery in any given case is in consequence of treatment, or inspite of it, or wholly unconnected with it. 3. Observations must be carefully made by competent persons, else they are of little value; and it is not every medical man, whose mental habits and previous training have qualified him for such work. False facts abound, and they furnish poor material from which to draw general conclusions. 4. Hasty generalizations, even if founded upon trustworthy observations, are worthless, and have been the bane of medicine at all times. They have an air of truth about them which renders them all the more dangerous. They are the offspring of untrained and illogical minds, and cannot stand the test of time and experience."

"In view of such difficulties, and the list is not exhausted, the path to success in the scientific treatment of disease seems so beset with obstacles as to disincline us from any harsh criticisms of the past, and to moderate our anticipations of the future.

"Let us in this matter do full justice to our predecessors. In all ages of our profession, the study of therapeutics has engaged the attention of wise and sagacious men. Any disparaging allusions to these men would be, to say the least, in very bad taste. If the results of their labors are not all that might be desired, or might have been expected, still they demand recognition, and should not be undervalued. Were all the knowledge we now possess in regard to the nature and uses of remedial agents obliterated, mankind would suffer a serious, an almost irreparable loss." * * * *

"Over-medication has been the besetting sin of the medical profession; and while clinical researches are going on to ascertain the influence of drugs, let it ever be borne in mind that nature is a kind mother, and that her healing powers are great; that she may be able to perform greater things than she has as yet been supposed capable of doing; that interference with her operations is a delicate matter, which should not be rashly undertaken. If it be a fact that there are diseases, now supposed to require various and powerful medicines, which will do equally well with less medicine than is commonly used, or with none at all, *medical science will be as truly advanced by observations and experiments tending to prove this fact* [the italics are ours], as by those which establish the efficacy of a new drug, or the beneficial effects of a new mode of treatment."

"Clinical study would be facilitated were we thoroughly acquainted with what may be called the physiology of disease. Much has been accomplished in this direction during the last twenty-five years, but more remains to be done. How can we decide with confidence upon the result of treatment, if we do not know the natural course of disease, uninfluenced by treatment? And without such knowledge are we not in constant danger of running counter to curative processes which nature may have initiated?"

"Disease, then, being a series of 'perverted life-processes:'—not a thing added to the animal economy to be driven out, nor a thing subtracted from it, leaving a void to be filled—these processes being as yet, after all our boasts, but imperfectly understood:—is to be managed carefully, with all possible knowledge and study, through its several stages. The sick man is to be *taken care of* so as best to endure the changes he is undergoing; and the object in any serious illness being usually not so much to drive disease out of the body as to keep life in it, whatever else be done, or be not done, let his strength be supported by proper nourishment, supplemented, if need be, by tonics and stimulants, so that he may be kept alive till the disease has run its course, and the natural forces have restored healthy, in place of diseased processes. Thus much, at least, reason indicates, and experience sanctions. * * *

"Diseases, which can be 'cut short' or 'broken up' by medicine, are few in number, and may be counted on the fingers. [He might have said thumbs, and possibly then had one to spare.] They are the exceptions to the rule. * * * * *

"The doctrine enunciated in this place, five years ago, that 'disease is a part of the plan of creation,' though at times assailed, has never been invalidated, and, better than any other statement, comprehends and explains the facts appertaining to human ailments. The primal causes of disease are manifold, hidden, and mysterious. As they existed in the beginning, so do they now exist, and probably will continue to exist. They lurk, unknown and undetected, in the food we eat, in the water we drink, in the air we breathe, in the earth on which we tread, it may be in planetary influences all about us. The 'dust in the sunbeam,' shown by Prof. Tyndall to consist of organic matter, and existing in the air of the city, the country, and the isles of the ocean, has been breathed by human lungs ever since man was created, and will continue to be thus breathed, despite all efforts of science, until man ceases to live upon the earth. It will be hardly possible to pass the whole atmosphere over the flame of a spirit lamp, or through a red-hot platinum tube; neither is it probable that all mankind will ever use respirators charged with cotton, however useful such contrivances may be under certain circumstances. While impurities of various kinds exist in the air, which we are constantly breathing; while one of its essential elements, oxygen, seems to be allotropic, and to be convertible into ozone, and possibly other gaseous substances; while these admixtures and changes are universal, and apparently inevitable; while the earth and the waters are full of matters possibly detrimental to health, we need not surely be surprised that diseases come, and we may well despair of being able to annihilate them. We can hardly resist the conclusion that they were included in the original plan of creation, and are designed to fulfil some purpose of the Creator." * * * * * *

"The purpose of the foregoing remarks has been to show *that the great need in medicine at the present time is Clinical Research*, more particularly in relation to the treatment of disease; that therapeutics are behind the other departments of medical science, and deserve increased attention from those who are competent to conduct scientific investigations; and the suggestion has been ventured, that the results of such investigations will be to simplify medical treatment, to incline physicians to trust more to nature and less to drugs, and to lead them in their remedial measures to consult the comfort, and to sustain the strength of the sick man, rather than to use violent measures to oust his disease.* Believing in the existence of this need, and in the truth of this suggestion, it is gratifying to perceive that the TENDENCY of medical thought and practice is in the direction thus indicated. The contrast between the treatment of the sick, as laid down in the medical books of to-day, and as approved by our leading physicians, with that of half a century ago, is sufficiently marked to attract notice. Active medication is less common than formerly; the rules of procedure are more simple, exact and philosophical; the heavy artillery of the Pharmacopœia is not in such constant action; restorative agents are gaining precedence over those of an opposite character." (Pp. 149—161.)

But we find ourselves quoting quite largely, and must, for want of space, omit many passages we had marked. The Discourse goes on to contrast the methods of the present day in the *taking care of* the sick with those of former times, bringing forward many apt illustrations which we would willingly copy. We must content ourselves, however, with recommending to each of our readers to give the whole of this valuable Discourse an attentive and thoughtful study; and we conclude our inadequate notice with a quotation full of suggestive encouragement to those timid practitioners who tremble for their calling in the progress of therapeutical science and the tendencies of the age.

"The tendency of modern practice is also seen in the increased attention now given to the subject of dietetics." * *

"Much has been accomplished of late years in this direction; more remains to be done. If any physician fear that, by the minimizing of drug-treatment, his occupation will be gone, let him diligently contemplate this field of labor; he will find it broad enough to afford full scope for his best energies." (P. 166.)

But, with firmer faith in the utility of all true knowledge, however temporarily disturbing to preconceived opinions, or to personal conceit, let us, as says the Discourse:

"In view of statistical records, tending to show the favorable results in times past, of medical counsel and practice; in view of the great advance that has been made during the last half century in medical science; in view of the fact, that never before has so devoted a band of earnest and competent men been engaged in investigations appertaining to every department of medicine, as at the present day, with means and instrumentalities to aid them in their work such as their predecessors never dreamed of; in view of a bright future thus dawning on our profession: let us reverently 'thank God and take courage.'" (P. 169.) H-P.

Medical and Surgical Journal.

BOSTON: THURSDAY, SEPTEMBER 15, 1870.

SURGICAL MEMOIRS OF THE WAR OF THE REBELLION.

WE find on our Editorial table a volume which bears marks of great professional value, a contribution to the professional literature of the late war. It contains the following divisions:—

I. On the Wounds of Bloodvessels, Traumatic Hæmorrhage, Traumatic Aneurism, and Traumatic Gangrene.

II. On the Secondary Traumatic Lesions of Bone: namely, Osteo-myelitis, Periostitis, Ostitis, Osteo-porosis, Caries and Necrosis.

III. On Pyæmia.

The work is written by Dr. John A. Lidell, Brevet Lieut.-Colonel U. S. Vols., late Surgeon in charge of the Stanton U. S. A. General Hospital, &c. &c., and is edited by Dr. Frank Hastings Hamilton.

The several papers constituting this volume belong to a series of surgical essays and observations accumulated from the late war, and were placed in the author's hands by the United States Sanitary Commission for publication. The subjects treated, although anatomically and physiologically separate, have intimate pathological relations, and in this way are not inappropriately arranged in the same volume. Embracing, as these papers do, all the more recent ideas upon the topics discussed, with a vast amount of careful original research, they constitute complete and exhaustive treatises which cannot fail of acceptance by the profession. The size of the book forbids our giving more than a brief outline of its subject matter.

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* In connection with these and other suggestions of Dr. Wellington, we are reminded of a valuable series of papers which have appeared, since the address was delivered, in the *Medical Times and Gazette* on The Progress of Therapeutical Science, almost identical in their general tone with that of Dr. W. Also an article on Errors in Diagnosis in the same Journal.—ED.

Dr. Lidell devotes his first chapter to *a general consideration of Traumatic Hæmorrhage,* with the phenomena which pertain to it, and naturally divides it into two distinct classes—the local and the constitutional. The subject of traumatic hæmorrhage, as it was observed among our wounded during the War of the Rebellion, is most conveniently considered under the heads primary, intermediary, secondary and parenchymatous. He applies the term intermediary to those cases occurring subsequent to twenty-four hours after the injury and prior to the advent of suppuration; and parenchymatous to that form of bleeding in which the issue of blood takes place, not from any one vessel that can be named, but from the whole of the wounded or ulcerated surface. It therefore appears to be essentially capillary in character and to depend for its production upon causes widely different from those which occasion either of the other varieties of hæmorrhage. Gunshot wounds of any part of the body do not, in general, bleed nearly so much as incised wounds of the same part, the former being essentially contused or lacerated in their nature, and so, analogous to the injuries by which limbs are torn off by machinery or crushed by railway engines. The hæmorrhage from this source is therefore seldom troublesome to the surgeon. The author, in a very large series of gunshot injuries, has seen but very few in which the bleeding continued in a threatening manner at the time of the examination. At one time, on examination of 300 wounded men, all of whom were injured by infantry firing, he made note of the fact that although a large proportion of them required the performance of capital operations, none of them had suffered much from hæmorrhage. At another time, in 800 wounded, he found the same result. This statement, of course, excludes those cases in which death has occurred at once on the field from the wounding of the main arteries of the body. He shows in connection with this fact how much injury may be done by the injudicious use of the tourniquet, and how unwise the practice was which placed this instrument so freely in the hands of the soldiers and other ignorant persons. The large arteries of the extremities are to a considerable extent protected against being wounded by rifle-balls by the strength of the fibrous sheath which invests them, by the toughness and extensibility of their coats proper and by the readiness with which they slip aside before the missile. The experience of every one who was in the service must bring to his mind numerous cases in which various parts of the body, and especially the neck, were riddled, without severing the arteries situated there.

Maisonneuve has shown that an artery may be pierced by a delicate instrument, such as a fine needle, without the production of hæmorrhage, or any other unfavorable result. The punctured wounds of war, however, give rise often to traumatic and arterio-venous aneurisms, ulceration and secondary hæmorrhage, and other like disastrous consequences. Contused wounds of arteries occur more frequently in military than in civil practice, and either produce inflammation and plugging of the artery or subsequently secondary hæmorrhage. The most striking examples of lacerated wounds of arteries are afforded by those cases in which limbs are torn off by machinery or carried away by cannon-balls, in which case the hæmorrhage is almost always spontaneously arrested; many cases were, however, witnessed in our late war in which this fortunate result was not experienced. Gun-shot injuries of arteries, notwithstanding their frequent escape, do however occur, especially in those cases where the velocity of the projectile is very great; when the velocity is retarded, contusion only is produced. Dr. Lidell takes occasion, in connection with the wounds of arteries, to notice the erroneous use of styptics for the arrest of hæmorrhage when arteries are wounded. Not the least interesting characteristic of the work under review is the combination of clinical and didactic teaching which it presents—for the author has happily combined, under the various heads treated, a valuable series of cases, and has followed each by comments which show careful thought and discrimination; criticizing where such a course is called for, and drawing practical lessons from failures as well as successes. In this way he deprecates the use of hæmostatics in hæmorrhage, where any arterial force behind keeps up the flow of blood. In this case the styptic is absolutely inefficient to produce the desired result; it changes the character of the wound so as to necessitate a slough from its surface before a cure can take place, and it acts itself as a deleterious foreign body.

Traumatic Aneurism.—This formidable affection of the arterial system is treated by our author in a very careful manner and with the usual divisions of surgical authors, the diffused and circumscribed. The operation of Antyllus, now frequently known as the "old operation," is that to which Dr. Lidell most frequently refers—consisting, that is, in tying the artery above and below the aneurismal tumor and then evacuating the contents. After the lapse of many centuries, this old operation continues to be preferable to all others in the treatment of most forms of traumatic aneurism. In a *résumé* of the methods of treatment, Dr. L. advises that traumatic aneurism of the popliteal artery, when produced by a gun-shot wound of recent origin, should be treated by amputation. In this case the old operation should not be performed, in consequence of the liability to gangrene following it. With the femoral, iliac, carotid, axillary, brachial, radial and ulnar arteries, the old plan may be adopted.

Gun-shot Wounds of the Veins, of such a character as to prove troublesome, occurred very rarely in the War of the Rebellion. Circular No. 6 informs us that "no cases have been reported in which the bleeding could not be controlled by pressure,"* and the Army Medical Museum contains very few specimens of injury to those vessels.

An interesting chapter on *Wounds of the Heart* gives us a series of cases of value. That gun-shot wounds of the heart are not always instantly fatal has been abundantly proved by the experience of foreign as well as American surgeons, and especially during the late war. Four cases of gun-shot wound of the heart are given in Circular No. 6, which came under treatment. Of course, as a general rule, the patient dies immediately, and the prolongation of life, under such circumstances, is a matter of infrequent occurrence. A case in the practice of Dr. Carnochan is related, in which the patient lived for eleven days and then died of pericarditis—in which the ball was found after death in the septum ventriculorum. Dr. Purple, of New York, has furnished, in a collection of thirty cases, a *résumé* of twelve in which the patients survived the injury for a considerable length of time, the periods ranging from forty-six hours to six years. An interesting case is given by Dr. Lidell in which a man received a wound of the heart from a stab, communicating with the right ventricle, in which the patient lived for seventeen days and then died of pneumonia. On making an autopsy, the heart was found to be nearly healed.

A chapter on *the Spontaneous Arrest of Hæmorrhage* from wounded arteries and the means by which it is effected, must receive more full attention from us at some future time.

The subject of *Intermediary Hæmorrhage* has but seldom found a place in the systematic treatises of surgery. MacLeod uses this term for those cases of hæmorrhage occurring after twenty-four hours and up to the tenth day, "being usually due," as he remarks, "to sloughing." Lidell, however, more justly, as it seems to us, limits this term to the intermediary period, *i. e.* after twenty-four hours and up to the period of established suppuration—the period, in fact, in which hæmorrhage takes place not from sloughing, but either from returning or from excited arterial action and the increased force with which the blood is driven through the arteries. Prof. Hamilton entertains the same views on this point. As the intermediary period is brief in duration, so the number of cases of intermediary hæmorrhage which come to the surgeon's notice is small when compared with the number of cases of secondary hæmorrhage which he is called to treat. Prof. Hamilton, in his treatise on military surgery, offers some very judicious observations on this subject.

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* Circular No. 6, Surgeon-General's Office, p. 39.

Secondary Hæmorrhage.—Under this term the author includes all bleedings from wounded arteries which occur subsequently to the establishment of suppuration, that is after the fifth or sixth day, and all losses of blood occasioned by the spontaneous rupture or opening of the sac in cases of traumatic aneurism. According to the statement of surgical writers, this is most apt to occur between the fifth and twentieth days, and especially about the fourteenth day. This does not, however, exactly accord with the observation of Dr. Lidell, who, in a series of 65 cases, gives an average somewhat higher. He treats, in detail, the causes of secondary hæmorrhage, giving cases illustrative of each.

In the chapter devoted to the *Surgical Treatment of Hæmorrhage*, an interesting case is given in which cerebral symptoms were developed within a few minutes after the common carotid was tied. The author gives the result of eleven cases in which this operation was done. Seven resulted fatally, three recovered and in one the result was unknown. In conclusion and after discussion of the various methods, ancient and modern, employed for controlling hæmorrhage, he considers the ligature to be decidedly the most reliable. This he would apply as early as possible, and to both orifices of the bleeding vessel.

Parenchymatous Hæmorrhage has not received distinct and special notice from surgeons until a recent period. No account is given of it by Hennen, Guthrie or the older writers on military surgery. Stromeyer considers it caused by the entrance of pus into the veins and of stoppage of the larger veins by coagulation; nevertheless he does not assert that it is not met with in the surface of wounds unaccompanied by pus in the veins. In fact it seems to have its source, according to Lidell, in the capillary vessels, and is in reality a capillary hæmorrhage. During the primary period in the history of wounds, it has been encountered in connection with amputations in limbs which have been previously inflamed, and in which the inflammatory process has not wholly subsided. It is also occasionally met with in the intermediary period; in the secondary period it is generally associated with pyæmia, and is in fact the condition of things described by Stromeyer; or in which thrombosis takes place in the veins of the affected part and the blood is forced out through the capillaries. In this method of hæmorrhage styptics become necessary. Dr. Lidell also suggests the use of water at 160° Fahr., so hot as to cause the coagulation of albumen. Actual cautery should be used as a last resort.

The disorders which are included in the second section of the work involve some one or more of the three constituents of bone—that is, either the periosteum, the bone tissue itself or the marrow; or, in certain cases, all of them combined. Indeed, the relation which exists between these several structures, both from contiguity and sympathy, is so intimate that a morbid process which attacks one of them is exceedingly liable to involve the others also, at least to some extent.

The *Secondary Traumatic Lesions of Bone* are mostly inflammatory and are discussed under the several heads given at the commencement of the article. The author has arrived at the conclusion that, of all the inflammatory disorders of bone of a traumatic origin, the inflammation of the medullary tissue is the one which possesses most importance, which occurs most frequently, which dominates over the others, and which is most liable to prove fatal. The disease was often met with in our hospitals in the late war—it was indeed, without doubt, one of the most frequent in occurrence and important in character of all those surgical affections which followed from shot injuries of the osseous tissues or from surgical operations involving bone. "Among the most striking and important anatomical facts relating to the healthy marrow are its softness, its vascularity and its richness in medullary cells. Its softness exposes it to injury, both in the nature of concussion and contusion, from violence applied to the bone which contains it; and if its vascularity and richness in cells render it liable to become inflamed, when injured, they also afford the means of readily repairing the consequences of most of the traumatic lesions to which it is exposed. Its vascularity and richness in cell formations also cause the inflammatory process to run a very rapid and destructive course in it (with suppurations), especially destructive in unhealthy subjects or under unfavorable circumstances as to hygiene and treatment." (P. 278.)

With this anatomical disposition of the marrow, we find osteo-myelitis a frequent accompaniment of all injuries of the bone. A very large majority of its victims have been young people—that is, persons who have not reached the middle period of life. Of thirty-seven cases occurring in civil life, which Dr. Lidell had collected, but five had reached forty years of age. One reason why inflammation of the medullary tissue is more apt to occur in youth than at the later periods of life, is in all probability the fact that the bones are still growing, and the marrow, especially in the long bones, is more vascular and more irritable. It is also influenced by sex, occupation, the scorbutic diathesis, impurity of the air, traumatic and other causes. We feel ourselves obliged to pass hastily over the author's description of the disease, its diagnosis and treatment. We cannot, however, fail to notice the carefully drawn descriptions of the cases and the wise comments he makes on them. It is in connection with this part of the work that the author gives a series of ten chromoliths, drawn and executed in this country, which we think we have never seen excelled for accuracy of delineation, and for the truth and beauty of the coloring.

Throughout the work the bibliography of the subject is excellent and the references are well selected and show great research. The corroborative facts are largely drawn from the works of the present day, and include such names as Virchow, Barwell, Ollier, Stanley, Klose, &c., names which in themselves give confidence in the facts stated and in the conclusions deduced from them.

The length of our article compels us to omit mentioning the articles on the remaining diseases of the bones, as well as the section on pyæmia, all of which are carefully written and are in themselves very valuable.

A CASE OF ANCHYLOSIS OF NEARLY EVERY JOINT OF THE BODY. By W. E. WHITEHEAD, M.D., Assistant Surgeon U.S.A.—On making the ascent of the Cumberland Mountains at Anderson's Pass, from the Sequatchie Valley, I made a halt on the top of the mountain at a small house by the road-side, to rest and get some refreshments. At this house were two women and two or three children; one of the women looked very ill, and was bolstered up in a large chair before the fire. Upon inquiry I was informed that she had been a martyr to rheumatism for years. I noticed cretaceous deposits about the joints of the fingers, and after further conversation, and on their discovering that I was a physician, the women became more communicative. The patient told me she could not move a joint in her body, with the exception of the fore-finger and thumb of the right hand, the right shoulder, under jaw, and could partially rotate her head—the motions of the joints named very limited. This statement was corroborated by the other woman, who was sister to the patient, as also from my own observation (partial) of the case. The sister was obliged to lift her from the bed to the large chair in which she sat or reclined, which operation she performed very easily, remarking that the patient did not weigh as much as one of her children, the eldest a girl of about seven years of age. The patient seemed to be a person of about thirty-six or thirty-eight years of age; her faculties were good—sight, hearing, and speech apparently perfect. She consumed large quantities of opium, and desired me to sell her some, but not having any to dispose of in that, or any other way, I promised her that should I pass that way again I would give her some. I had occasion to return in about ten days, with a wagon-train of wounded, and I called and gave her some powdered opium.—*Pacific Med. and Surgical Journal.*

IN an interesting paper read before the Leipzig Obstetrical Society, Dr. Korman urges subcutaneous injections of morphia in obstetric practice, under the following circumstances, viz.: 1. During painful dilatation and expulsory periods, especially in primiparæ and in narrow pelves. 2. In spasmodic pains. 3. In painful complications of the process of labor in general. 4. In severe after-pains.—*National Medical Journal.*

DEATH FROM A UTERINE INJECTION.—Dr. J. C. Nott, of New York (*New York Med. Journal*), informs us that Scanzoni published a case of death, in one hour and three quarters, from injecting carbonic acid into the cavity of the neck.—*New York Med. Rec.*

Medical Miscellany.

Anonymous Communications.—We are compelled once more to remind our patrons that we do not feel bound to pay any attention to communications which come to us without the names of the authors attached, or, at least, made known to the Editor. Such articles find a speedy and permanent resting-place in our capacious waste basket. The name of the writer *must* be entrusted to the Editor, as a guaranty of his good faith.

A New Medical Journal.—Messrs. J. B. Lippincott & Co. announce that on the 1st of October, 1870, they will commence the publication of a new semi-monthly medical journal, entitled *The Medical Times*, each number containing sixteen double-column quarto pages of reading matter, printed in handsome style. An able corps of editors and contributors has been secured. The subscription price is fixed at four dollars.

"Liberality of the Albany Med. School—Fraternization of Allopathic and Homœopathic Physicians."—A correspondent of an Albany (N. Y.) paper, sends this item to its editor:—

"The Hon. Ira Harris delivered the opening address at the college yesterday morning. The address was able and interesting, and we were pleased to see many homœopathic physicians in attendance. Mr. Harris is a firm believer in and patron of homœopathy, and fills a chair in the college. It is indeed gratifying to know that the barriers which have hitherto divided the two schools of medicine are being removed, and to see our college taking the initiatory step towards such a desirable achievement. We believe this is the only allopathic medical institution in this country that possesses views sufficiently liberal to allow any of the chairs to be filled by men who firmly and practically believe in the homœopathic doctrine. It is also pleasant to know that several of the trustees of the college are firm believers in homœopathy."

What say our Albany friends? Is homœopathy to be recognized in their school?

The Tomato.—"A Constant Reader" asks us to give "in the next number of your Journal, the most recent and reliable analysis of the tomato," and adds to this request the query, "Is there any foundation in science for the condemnatory language which the tomato, as a universal esculent, has received from certain popular medicists of the day?"

As the time allotted us for the answer is too short for an elaborate article, we place the communication before our readers, with the hope that some analyst will kindly give the result of his investigations. We have looked in vain for the honorarium usually accompanying letters asking for information.

Mortality in the city of Paris, for the week ending Aug. 13th, 1,122—of which, 176 deaths were caused by variola; 87 by diarrhœa, 38 by typhoid fever, 32 by pneumonia, &c.

Medical Communications of the Massachusetts Medical Society.—We are requested to state that, through an error in preparing the copy of the Communications for 1870 (mailed to the members on the 6th inst.), the lists of the Councillors and Censors of the Middlesex South District Medical Society are incorrect, those of 1869 appearing instead of those of 1870. The following is a corrected list.

Councillors.—H. Cowles, Saxonville; Richard L. Hodgdon, Arlington; Samuel H. Hurd, Charlestown; Theodore Kittredge, Waltham; Thaddeus P. Robinson, Newton Centre; Lucius L. Scammell, Hopkinton; John L. Sullivan, Malden; Henry P. Walcott, Cambridge; Royal S. Warren, Waltham; A. Carter Webber, Cambridgeport; John W. Willis, Waltham.

Censors.—Zabdiel B. Adams, Framingham; Edward R. Cogswell, Cambridgeport; James C. Dorr, Medford; Otis E. Hunt, Waltham; Jonas F. Wakefield, South Malden.

To Correspondents.—Communications accepted:—Case of Urethral Calculus—Coup de Soleil, followed by Paralysis.

Pamphlets Received.—Annual Address delivered before the American Institute of Homœopathy, at its Twenty-seventh Anniversary, at Chicago, June 8, 1870, by Carroll Dunham, M.D., of New York. Pp. 23.—Fifth Annual Report of the Hospital for Diseases of the Skin, Regent Street, Belfast, Ireland. Pp. 20.

Died,—In New York, Gunning S. Bedford, M.D., long known in that city as a leading practitioner of medicine, and extensively known through the country as a popular Professor in the Medical Department of the University of New York, and also as the author of several valuable works on midwifery.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending Sept. 10, 1870.

Cities and towns.	Total.	Prevalent Diseases	
		Cholera Infantum.	Consumption.
Boston	121	22	12
Charlestown	12	4	2
Worcester	31	5	5
Lowell	16	3	6
Milford	8	3	1
Chelsea	2	0	0
Cambridge	23	7	3
Salem	12	1	2
Lawrence	7	3	1
Springfield	9	0	3
Lynn	14	3	1
Gloucester	5	1	0
Taunton	11	2	4
Newburyport	4	0	1
Somerville	5	2	1
Fall River	17	4	2
Haverhill	5	0	3
	302	60	47

From all the above-named places there are reported eighteen deaths from dysentery and diarrhœa, and nine from typhoid fever.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Sept. 10th, 121. Males, 68; females, 53. Accident, 8—apoplexy, 2—disease of the bowels, 1—inflammation of the bowels, 1—congestion of the brain, 4—disease of the brain, 5—cancer, 3—cholera infantum, 22—cholera morbus, 1—consumption, 12—convulsions, 2—cyanosis, 1—debility, 1—diarrhœa, 4—dropsy of the brain, 1—dysentery, 4—scarlet fever, 3—typhoid fever, 2—gastritis, 1—disease of the heart, 2—icterus, 1—infantile disease, 4—insanity, 1—intemperance, 1—disease of the kidneys, 4—congestion of the lungs, 1—inflammation of the lungs, 3—marasmus, 6—necrosis of ribs, 1—old age, 2—paralysis, 3—peritonitis, 1—premature birth, 2—malignant pustule, 1—puerperal disease, 1—teething, 1—tumor, 1—unknown, 6—whooping cough, 1.

Under 5 years of age, 62—between 5 and 20 years, 5—between 20 and 40 years, 25—between 40 and 60 years, 14—above 60 years, 15. Born in the United States, 84—Ireland, 27—other places, 10.

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Original Communications.

APHASIA, AND THE PHYSIOLOGY OF SPEECH.

(Concluded from page 166.)

Language.—In its most comprehensive sense language includes the expression of ideas and emotions by speech, writing and gesture. It requires the use of the whole range of nervous centres, from the lowest to the highest. Articulate speech is an acquired function, and like all other coördinate muscular acts, depends upon a guiding sensation. The first step in the process of education is the establishment of an association between the organized auditory impressions and the centres of coördination necessary to the reproduction of corresponding sounds. This process is very gradual, and results partly from attention to spontaneous utterances and partly from imitation. The voice educates and corrects the ear, as well as the ear the voice. The association between the auditory impressions and the corresponding ideas may precede that necessary to speech. Children understand much that is said before learning to talk themselves.

The guidance of the ear is still necessary after facility of speech is acquired. In most other complex movements, the muscular sense, either alone or assisted by vision, as in locomotion or the manual operations, is a sufficient guide. That speech depends on the guidance of the auditory nerve, is evident from the fact that it rapidly deteriorates when hearing is lost. Dr. Kitto's detailed account of his own case, as related by Carpenter, is interesting. On becoming completely deaf, he felt so much pain in the vocal organs on attempting to speak under the guidance of an unused muscular sense, that his voice fell into disuse and remained so for years. It resembled that of a deaf-mute who has been taught articulation. Circumstances afterwards requiring him to speak much, he improved greatly by careful attention to the promptings of the muscular sense.

The following case is so instructive in many ways that I give it at length, as I received it from Mr. G. O. Fay, the Superintendent of the Institution for the Deaf and Dumb, Columbus, Ohio.

"The history of Morfier's case is as follows. In childhood he had occasional epileptic fits, affecting his sight, more or less, and blunting his mental faculties. At length, in 1866, he became totally blind, and entered the Blind Asylum here. Last spring (1869) he had severe pain in his head and eyes, resulting speedily in the restoration of his sight and in the loss of hearing. *Speech* was lost at the same time. He was received here as a pupil in September. He was not deficient in mental activity, and in a few weeks was quite at home among ordinary deaf-mutes. He was suddenly attacked, soon after, with headache, especially affecting his eyes, losing the ordinary voluntary and involuntary motions of the eyeballs and lids. The pain was intense, and evidently neuralgic. His hearing became perfect again, and after several days *he began to speak.* He recovered his general health and was about the house. After two weeks he had a sudden return of the pain, with total loss of hearing. He also lost, for a time, the control of his tongue and the sense of taste. After a few hours, sight returned. The next day he suffered intensely about the thorax and heart. Respiration and the heart's action would suspend every two or three minutes, for thirty seconds, or even a minute. These disturbances soon passed away, and for three weeks he has been precisely as at first—a *deaf-mute* with good eyesight and mental faculties."

Speech may be reflex under certain circumstances, as when a sudden sight, sound, idea, emotion, or pain, causes an exclamation. This is often observed in cases of complete aphasia, the extraordinary channels of nervous impulse remaining intact, or some extraordinary increment of power forcing a way through the usual ones. Continued automatic speech is also a common phenomenon. Talking to one's self, reading aloud, and conversation even, are often performed unconsciously and with little or no voluntary effort.

Speech is, however, more intimately associated with ideation than other muscular acts, since it consists in a translation of ideas, in all their variety and detail, into words. This translation is not direct, since it is accomplished through the medium of remembered auditory impressions in the sensorium, but it implies the most extensive relations between the sensory word centres and the centres of ideation. The connection between ideas and unspoken words seems to be necessary and immediate, so much so that Max Müller, among other authorities, considers mental language absolutely indispensable to thought. This would be the natural result of concurrent education, ideas and words by close association suggesting each other reciprocally.

Writing is nearly allied to speech in that it expresses ideas by visible instead of audible representatives. Instead of the centres coördinating the movements required in speech, a centre associating certain movements of the hand is organized and employed. The ideas and words being the same, the nervous impulse seeks a new outlet of discharge.

Gesture is not, strictly speaking, a language, unless used to express definite ideas and words, as in the hand-language of deaf-mutes. It interprets best the emotional quality of thought, and performs this office better than speech. In disease affecting the power of speech it is less likely to be impaired than the power of writing, since it is a function pertaining to each of the motor centres. When all the modes of expression referred to disappear, it must be in consequence of some extensive or powerful cerebral lesion. In the general paralysis of the insane, for instance, is seen a gradual extinguishment of all power of expression, from disease involving not only the ideational but the motor centres.

Localization.—While feeling utterly incompetent to deal with so obscure a subject as that of cerebral localizations, one may still venture to point out the apparent tendency of thought on this question. The belief, for instance, in any system of organs corresponding to the mental faculties of either the phrenologist or the metaphysician, seems to be dying out, in spite of its resuscitation by the supposed discovery of M. Broca. The existence of the phrenological faculties and their location was assumed on inadequate generalizations, and the attempt to bridge the gulf between mind and matter in this way has failed. The metaphysical divorcement of the mental faculties from each other and from their physiological relations, is also in a fair way to be annulled, and hopes are entertained that the unity of mind may be established eventually on a scientific basis.

The difficuties of localization have been increased by false conceptions of the nature of the so-called mental faculties. These have been defined and classified for centuries according to metaphysical necessities as seen by the deceptive light of individual consciousness, with but little thought of their material connections. The metaphysician has had no incentive to locate faculties which he believed inherent in the immaterial spirit. The phrenologist, on the other hand, with a list of faculties still more artificial and arbitrary, has not hesitated to parcel them out, like the pieces of a dissected map, over less than one half the cerebral surface, leaving the other half functionless.

In considering an important cerebral function like the faculty of speech, it may be safe to assume that certain parts of the cerebrum are uniformly devoted to the same offices; though it is not impossible that in some cases there may be a substitution of one group of cells for another, just as an object may be equally well seen by different parts of the retina. The great conductibility of the grey matter as seen in the cord undoubtedly exists in the brain, and admits of the diffusion of impressions to an unknown extent. Therefore, however true the above assumptions may be of the main divisions of the cerebrum, it does not follow that a geographical distribution, as it were, of the mental faculties is possible in all their variety and detail. In speaking of the *faculty* of speech, the word should be divested of its stereotyped significance, and should be used simply in the sense of power or attribute. Speech is no more a mental faculty than locomotion. Its perfection requires the action of the whole series of anatomical possibilities—motor, sensory and ideational. It begins in the evolution of ideas, which implies the integrity of the cortical substance of the hemispheres. The memory for words must also be unimpaired. The power of voluntary transmission, the perception of auditory impressions, the proper functional activity of the centres of coördination and the nervous communication with the necessary muscles must be intact.

Those convolutions not directly connected with the central fibres are said, by

Dr. Broadbent, to be superadded in man for special functions, and are not to be found in the lower animals. In them, therefore, we may look to find the seat of that higher evolution of ideas which distinguishes the mind of man from the mind of brutes. In the basic ganglia we more naturally seek those centres of perception which fit the impressions of sense for the psychical interior, and those centres of coördination which translate the mandates of the will into motion.

Dr. Kahlbaum, in a paper on Sense-delirium (Zeitschrift für Psychiatrie, Berlin, Jan., 1866), says:—"The organs of perception are situated in the grey matter at the base of the brain, in the medulla and in the cord, especially in those parts of the ganglionic substance which appear in the process of development as primary organs, and exist in analogous forms throughout the whole range of the vertebrates. The organs of apperception are certain parts of the cortex of the cerebrum, near the longitudinal fissure, which constitute secondary centres in the order of development, and which become so large and intricate in the higher ranks of the vertebrates." He regards the centres of apperception as the true seat of consciousness and memory.

The first two stages in the elaboration of speech are in such close relation as to seem almost identical. This is probably due to the close association which exists as the necessary result of education between the ideas of things and the ideas of the corresponding words. Neill, Max Muller, Stewart, Schelling, Hegel, Descartes, and others, agree in supposing an intimate and necessary relation between thought and language. Dr. Robertson says:—"If processes of thought are carried on by aphasics, words are likewise present at the same time." (Jour. Ment. Science, June, 1867.) From this opinion he argues that most cases of aphasia are not amnesic, defects of transmission being sufficient to account for the symptoms, with the addition of those symptoms of mental weakness common to all hemiplegics.

Trousseau, who regards most cases of aphasia as amnesic, believes also in the interdependence of thought and language, and is therefore obliged to insist on the real impairment of intellect in spite of apparent intelligence. He thinks Lordat, who held a contrary opinion concerning the dependence of thought upon the mental use of words, deceived himself, and gave evidence in his own case of its incorrectness. (Clin. Lect., chap. vii.)

If the above views of the necessary relations of ideas and words are correct, their corresponding nervous centres must be coextensive, and we should naturally assign to verbal memory a seat in the grey matter of the convolutions. Dr. Moxon thinks the *ideas* of words are distinct and separate from the necessary coördinating centres, just as the ideas of all associated motions are supra-motory, and of all associated sensations supra-sensory.

Since M. Broca makes so wide a distinction between amnesic and ataxic aphemia, Dr. Bartholow thinks he would not expect to find the lesion in both in the third frontal convolution, and that cases of lesion in the motor tract cannot be quoted against his theory. (Jour. Ment. Science, April, 1865.) M. Broca's language, as previously given, warrants, I think, a different conclusion, and whichever hypothesis of the nature of articulate speech should be adopted, he *would* locate that faculty in the third left frontal convolution. But to limit the memory of words to a single convolution in one hemisphere while the associated ideas are widely distributed, as is supposed, in both, seems to involve an absurdity. So the location of a centre of muscular coördination for speech in the region usually assigned to ideation, seems contrary to the proper subordination of parts. We should look, then, for the centres of auditory perception and of muscular coördination in the basic ganglia or medulla, in more immediate relation with the nuclei of their associated nerves.

It will be noticed that in most cases of aphasia, the white as well as the grey matter is implicated. The favorite seat of lesion seems to lie between the corpus striatum and the third frontal convolution, often extending to the island of Reil, involving, therefore, more or less the central fibres of the hemispheres. Dr. Jackson accounts for the symptoms following lesions in this vicinity by suggesting that the corpus striatum is the way out from the hemispheres to those centres most immediately under the control of the will, and that disease in this vicinity affects the transmission of voluntary impulse. It is observable, he says, that the nearer the corpus striatum the lesion is found, the greater the defect of articulation. In wide-spread but slighter mischief, such as embolism of small arterial branches produces, the loss of memory is more marked. (Times and Gaz., June 23d, 1866.) Dr. Robertson believes the lesion in aphasia to be essentially a motor and not a mental one (Jour. Ment. Science, Jan., 1867), and Drs. Letourneau and Cerise consider defective transmission as the chief difficulty in most cases. (Jour. de Méd. Mentale, Paris, Sept. and Oct., 1866.)

The involuntary and emotional ejaculations of aphasics are best explained by supposing the integrity of the coördinating centres, the transmission of voluntary impulse, or the memory for words being alone affected. Speech in such cases is simply a reflex phenomenon, some stimulus other than voluntary exciting these centres to automatic action. If this stimulus is emotional, as it often seems to be, we may suppose, with Dr. Robertson, independent channels for its transmission to the sensori-motor apparatus, which have escaped lesion. If, however, as Maudsley supposes, emotion is the sensibility of the nerve cells to their own ideas, its mechanism must be closely associated and coëxtensive with that of ideation. He denies that there are any good grounds for believing the nervous centres of emotion distinct from those of ideation. (Phys. and Path. of Mind, p. 137.) In such case we must suppose that some extraordinary increment of power forces its way through the obstructed channels.

Spencer, in his Essay on Music, considers language as two-fold—intellectual and emotional. All speech, he says, is compounded of words and tones, corresponding to ideas and feelings, cadence being the commentary of the emotions on the propositions of the intellect. It is true, there is an emotional language, but cadence is a small part of its method of expression. It includes facial movements, gesture and pantomime. It is more frequently automatic than speech, its involuntary and semi-conscious character making it a more truthful reporter of the mental states. Dr. Jackson, in reference to this subject, says: "It would seem that the centres for emotional, semi-voluntary, and involuntary actions are in the cord and medulla; but where the power is which sets them agoing is not so clear. (Times and Gazette, June 23d, 1866.)

The frequency of lesions in the *left* half of the brain in aphasia demands explanation. It undoubtedly depends on some difference of original structure, or of education. It is well known that there is a lack of symmetry in the arrangement of the convolutions; but what this implies is not so evident. Gratiolet states that the left frontal convolutions are developed earlier than the right. (Mémoire sur les Plis cérébreaux de l'Homme et des Primates, Paris, 1854.) Carl Vogt denies this, while Bischoff does not mention it, though he sees much significance in the comparatively undeveloped third frontal convolutions of apes. (Die Grosshirnwindungen des Menschen; München, 1868.)

Unilateral muscular acts are, however, matter of daily observation. All right-handed acts, of which writing will serve as an example, are guided by the left hemisphere, and cease at once from lesions producing right hemiplegia. If it is said that on account of direct as well as crossed transmission the ideas of unilateral movements become organized, on both sides alike, why does not the right hemisphere in lesions of the left still carry on the right-handed operations? If it is further said, that the united action of both hemispheres is required, why does not general paralysis follow damage to either?

The theory of Dr. Moxon furnishes the most plausible explanation yet offered, of the occurrence of aphasia in left-sided lesions of the brain. (Med.-Chir. Rev. April, 1866.) It is based upon the observation that in many simultaneous movements of the hands, for instance, the attention and will are only occupied with the movements of one, the other following. The attempt to make opposite revolutions with one's hands at the same time usually results in both joining in the motion of that one to which the attention is directed. From an analysis of this and similar facts, he draws the following inferences. (1.) "That attention to one hand only is sufficient to guide the other in the same motions at the same time. (2) That it is very difficult, and without special education impossible to give simultaneous attention to the two hands. In short, that we have but one attention for two hands." He further says, "Now as education is based on the memory of former acts, and as memory resides where attention was in action, education of similar simultaneous motions will grow up on one side, that on which attention was operating. No education will grow up on that side which habitually follows. The accumulation of skill or memory on one side would suffice for the two, in consensual action, while the accumulation of skill by attention alternately to either side would be unavailable for simultaneous motions, on account of the impossibility of using both stores, by the attention, at the same time; so that in regard to simultaneous motions of the two hands, there would be no need of educating the two sides, it being easier to educate one."

From these premises he argues that as the organs of speech are bilateral, with independent nervous connections, and yet so joined as to render consensual all movements used in speech, there is no necessity for educating the two sides; in fact, a unilateral education would be the easier. "So that all that store of recollections of movement associations which constitutes the power of speech will be located in the left brain, which corresponds to the right tongue, there being no remembered results of attention, that is, no education, on the other side, where attention never operated. Yet in the right brain there will be all the organs which, if educated, would become the seat of speech-power: so that the ground-plan symmetry of the organs of speech is preserved."

This theory resembles that of Valentin, who attributes the consensual motions of the eyes to the action of the will on one of them, the other following by virtue of the peculiar arrangement of their nervous connections. (Physiology, Trans. by Wm. Brinton, London, 1853.) It is also rendered more plausible, perhaps, by the increasing asymmetry of the convolutions in man. Dr. Hughes Bennett, however, thinks that the use of the side which follows amounts to education of it, and asks why aphasics do not learn to talk with the right. Dr. Jackson believes Dr. Moxon's theory an important one, but thinks both sides are educated, and that the left begins to act; and that those educated actions which have by habit become involuntary are due to the action of the right side. This he does not attempt to explain.

Some ingenious speculations which have been made upon the causes of right-handedness may have a bearing on the left-sidedness of the lesion in aphasia. For instance, Hyrtl has advanced the theory that right-handedness is due to the better nutrition of the right side, in consequence of the more direct, forcible and larger current of blood which flows through the right subclavian. Left-handedness, which occurs about twice in one hundred individuals, he attributes to anomalous origin of the subclavian, or to transposition of the heart. (Topographische Anatomie, vol. 2, Wien, 1865, p. 291.)

Baillarger, on the contrary, considers right-handedness due to the better nutrition of the left brain, which depends on the following conditions: "When fluid passes suddenly from a tube of large to one of small calibre, the velocity is increased. The right carotid is separated from the aorta by the innominata, so that blood flows through a vessel of gradually decreasing size; but the left carotid rises directly from the arch, so that by this law, the blood moves more rapidly, and the activity of the left cerebral circulation is increased, thus accounting for the greater force and dexterity of the right side of the body." (Intercranial Circulation. Boylston Prize Essay, 1867: by Thomas Dwight, Jr., M.D. Quoted from the Gaz. Heb., 1865, p. 280.)

It is doubtless a fact that the right side of the body, and the left side of the brain, are better nourished than their opposites; but that this is originally due to arterial asymmetry is not clearly shown. Both these theories cannot be correct, since what Hyrtl says of the right subclavian would seem also to apply to the right carotid, and what Baillarger says of the right carotid would seem to invalidate Hyrtl's conclusions about the right subclavian. I am not aware that any perceptible difference exists between the radial pulses of the two hands; and Dr. Dwight informs me that in twelve cases of transposition of the heart which he has heard of, at home and abroad, each patient was right-handed. Baillarger's theory may find some support in the rather more frequent occurrence of embolism on the left side of the brain. In fact, it is to some anatomical difference as yet unknown or misunderstood that many attribute the almost uniform existence of the lesion in aphasia on the left. In the few cases of aphasia and left hemiplegia which occur, or when the lesion is found on the right side, information concerning the patient's right or left-handedness would be interesting.

Conclusions.—The following conclusions, it is believed, may be safely adopted:

I. Most cases of aphasia include both aphemia and agraphia.

II. The concurrence of aphasia and right hemiplegia is very common. In such cases the mental impairment is not decidedly greater than in left hemiplegia without aphasia.

III. The symptoms in aphasia may have a decided mental or motor aspect, or partake of both characters.

IV. Theoretically, the lesion in aphasia may impair the power of speech by producing disorders of ideation, loss of memory for words, interruption of voluntary transmission, interference with auditory impressions, defects of co-ordination, and paralysis of the muscular apparatus. Practically, it gives rise to two or more forms of disorder.

V. As a rule, the lesion will be found in the anterior lobes, and in the left anterior lobe in a proportion of about 15 to 1. There are well marked exceptions to the proposed laws of MM. Bouillaud and Dax, while the evidence in favor of M. Broca's location is quite insufficient to justify his inferences.

VI. The lesion in aphasia usually involves the white as well as the grey substance, and is often due to embolism of the left middle cerebral artery, followed by softening of the parts supplied.

VII. There is anatomical evidence of the most complex and delicate systems of cells and fibres in the cerebral convolutions, and it is a fair inference that as in the cell groups of the cord, medulla, and basic ganglia, there are here carried on special functions, but of a higher order.

VIII. There is good evidence of an increasing elaboration of structure and function in ascending from the cord to the convolutions. This ascending scale may be arbitrarily divided into centres, at once independent and subordinate, having general analogies of action, with special differences, but which are difficult of precise limitation.

IX. The centres of muscular coördination for speech have with most reason been assigned to the medulla, or in proximity to the nuclei of the controlling nerves.

X. The faculty of articulate speech, in its mental as well as its motor aspect, is an acquired one, depending on the gradual organization and association of auditory impressions, ideas and movements.

XI. It is not impossible that the same convolutions uniformly perform the same functions, or that groups of ideas may be related by a superficial contiguity in the cortical substance; but there is no good evidence that such groups correspond to any of the so-called mental faculties, and no such faculty has yet been definitely located.

XII. There is some evidence of both asymmetry of structure, and difference of function, between the two hemispheres, which is at at present best accounted for by the theory of unilateral education, depending on anatomical differences not yet clearly understood.

CASE OF STRICTURE OF RECTUM FROM CANCEROUS INFLAMMATION. DEATH.

By E. P. Hurd, M.D., Newburyport, Mass.

I shall endeavor, very briefly, to narrate the principal particulars of this interesting case. The subject was a patient of Dr. Perkins, of this city.

Mrs. ——, of Newburyport, for some time ailing, took her bed in February last. The well-marked symptoms of peritonitis gave place to those of obstruction. At first, scanty discharges were obtained by means of croton oil and colocynth, purges and enemata; the latter soon failed to have any effect. The abdomen became enormously tympanitic. A gurgling sound, like that of pouring water from a bottle, was constantly heard on auscultating. Entire abdomen resonant on percussion. The usual painful symptoms of extreme abdominal distention were experienced. By and by she could not sleep, except in erect posture. Diagnosis, intestinal stricture; seat of stricture undetermined.

Treatment, mainly palliative. Ice poultices had been tried with benefit. The resources of materia medica had been taxed by my indefatigable *confrère*. Turpentine and other alterative and carminative remedies failed to give much relief. Progressive failure of the organic functions. Emaciation. For more than three months before death there had been no movement of the bowels. Enema-pipe entered but a short distance, and injections immediately returned. Patient was sustained on liquid food. Death, which took place about the first of July, was preceded by stercoraceous vomiting.

Autopsy (performed by Drs. Howe, Snow, Cross, and myself) revealed an enormously distended colon. The transverse colon, blown into a retort-shaped body, occupied the anterior portion of the abdomen, the lateral and superior regions; circumference, 21 inches. This gut resembled a dried bladder, not collapsing on puncture. Stomach and small intestines of natural size, and full of stercoraceous matter. The uterus was retroflexed from superincumbent pressure. The left ovary was encephaloid, and uterus, bladder and upper fifth of the rectum were bound down to the sacrum by constricting bands, the product of meso-rectal inflammation. The canal of the bowel was obliterated at this point. Neither above the seat of stricture nor below could a bougie be made to pass the constriction. Numerous small scirrhous nodules—apparently passive—from a pea to a filbert in size, studded the meso-rectum and the fascia of the iliacus muscle.

From the experience of the above case, which by the kindness of Dr. P. I was allowed frequently to examine during the life of the sufferer, I think I am warranted in concluding that steadily augmenting tympanites, accompanied by fæcal retention and obstruction, is pathognomonic of intestinal stricture; that, *a priori*, peritonitis points to organized inflammatory lymph as the constricting cause, and that the continuance for a considerable length of time of the tympanites and the obstruction, indicates a stricture near the termination of the large intestines.

INEQUALITY IN THE MILK OF THE TWO BREASTS IN WOMAN.

Translated from L'Union Médicale, by **Frank W. Draper**, M.D., Boston.

M. **Louis Sourdat** recently reported to the Academy of Sciences in Paris the notes of a case of inequality in the amount and composition of the milk secreted by the two mammæ of the same woman. Having observed that a nursing child showed an evident preference for the right breast of its mother, a preference which had been remarked also in two previous children, and having noticed, moreover, that this breast was of larger size than its fellow, and gave nearly twice the amount of milk, he examined a number of specimens of the secretion and arrived at the following results:

1. The composition of the milk of the same woman taken simultaneously from both mammæ is very variable from day to day, even when there is no appreciable change in the general condition of the woman. A temporary fatigue, or a slight change in diet, or a more or less prolonged retention of the milk in the breasts, suffices to cause these variations. In eight analyses the weight of the dry residue varied from $10\frac{10}{100}$ per cent. to $13\frac{70}{100}$ per cent. The specific gravity likewise varied from 0.980 to 1.031.

2d. The composition of the milk varied in the two breasts at the same time. The secretion of the right side, which was far the more abundant, was also richer in the solid constituents.

3d. Under these conditions, butter was generally in much greater amount in the milk of the right breast than in that of the left. The appearance of the specimens would itself alone confirm these last differences.

4th. The nitrogenous substances, casein and albumen, like the butter, were formed in the right side more abundantly.

5th. The soluble principles were, it is worthy of note, found in five analyses to be nearly equally distributed in the two sides. Yet, in two instances in which there was a slight difference, it was found to be in favor of the side containing the less butter.

A similar variation pertained to the salts; so that it would seem from this that there exists a certain correspondence between the fatty and the nitrogenous substance on the one hand and the soluble elements on the other.

REJOINDER TO CERTAIN EDITORIAL REMARKS ENTITLED "A RESOLUTION WITHOUT LEGAL FORCE.*

By J. L. Sullivan, M.D., Boston.

Messrs. Editors,—An attentive perusal of your editorial remarks bearing the above title, convinces me that you have misunderstood, if not the force, at least the *purpose* of the resolution. Moreover, you have wandered to the consideration of another and very different question, viz., the expediency and possibility of accomplishing the end contemplated thereby. This has been done in such manner as to make it appear doubtful whether you have written in the interest of the Massachusetts Medical Society, or of those whose connection with it is deprecated by the majority of its members, including yourselves.

In presenting my own views, I shall approach the legal questions involved in the diffident spirit which characterizes your own remarks, alluding to these questions as briefly as the nature of the subject will admit.

I will begin by repeating the resolution:

"*Resolved*, that the Massachusetts Medical Society hereby expels from fellowship all those who publicly profess to practise in accordance with any exclusive dogma, whether calling themselves Homœopaths, Hydropaths, Eclectics, or what not, in violation of the Code of Ethics of the American Medical Association."

The provisions of the Act of Incorporation bearing upon the above are as follows:

"The Fellows shall have power to suspend, expel, or disfranchise a Fellow of the Society."

"The Fellows of the Society shall have full power and authority to make and enact such Rules and By-Laws for the better government of the Society as are not repugnant to the laws of the Commonwealth."

By this provision the Society is empowered to create and put in motion the machinery by which the power and authority delegated to it may be made practically available. But in the exercise of this authority it cannot ignore the principles of justice which the laws and statutes of the Commonwealth are supposed to embody. Hence, "although the Society has the right to make By-Laws and to prescribe regulations for admission and membership, these regulations must be reasonable;" although it is competent "to suspend, expel or disfranchise a Fellow, it can do this only for reasonable cause."

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* Vide Boston Medical and Surgical Journal for July 28th, 1870.

What is "reasonable cause?"

On reference to the By-Laws it will be seen that the main purpose of these enactments is to protect the Society against malfeasances on the part of its members, amongst which malfeasances are included certain acts and practices not criminal in themselves, but which for good and sufficient reasons the Society has forbidden to the Fellows. These acts and practices are offences not against the public, but against the Society. Hence, while the Society's judicial powers are limited by its Charter to the infliction of certain penalties designated therein, as respects offences punishable by these penalties, the Charter is silent. For obvious reasons it is left to the Society to determine what shall constitute an offence against itself. One of these reasons, it is fair to presume, is that in the opinion of the Legislature the Fellows were and always would be the natural and proper judges. Nothing, however, can be clearer than that while the Society's authority to discipline or punish an offending member is, by law, restricted to the infliction of certain prescribed penalties, it is, likewise by law, left free to determine what shall constitute an offence against itself.

Hence, any act or practice—however trivial in itself—which the Society has for good and sufficient reasons pronounced injurious to its welfare will constitute an offence against the Society, and the commission of such act or practice in contempt of the Society's prohibition will afford reasonable cause for the expulsion of a Fellow. If it were not so we should have the curious anomaly of an incorporated body without authority to regulate the conduct of its members in matters however deeply affecting its prosperity, honor or existence; we should have the spectacle of a Society bound hand and foot by its own Charter, the surrender of which would be the wisest step it could take. If the views of the Journal are correct, such, at this moment, is the helpless situation of the Massachusetts Medical Society, invested with the shadow but not the substance of authority—saddled with a Charter which forbids it to protect itself. That this is the "force and purpose" of the Charter is too absurd for belief. The common sense of all but those who wish it protests against putting this forced construction upon that document, and thus by implication imputing not only to the Legislature which granted, but to the organization which accepted it, lack of ordinary wisdom and foresight. In short, the question before us is not as to the existence of power, but as to the manner in which that which is may be lawfully exercised.

We come now to what is in reality the main question. It may be thus stated:

Is the particular act or practice specified in the resolution prejudicial to the interests of the Society, and therefore does it afford reasonable cause for the expulsion of a Fellow who may commit the same in contempt of its prohibition? Upon this question the Society has already virtually sat in judgment and rendered an affirmative decision. It has done this not only by the passage of the resolution at the late annual meeting, but long before, as appears by By-Law 1st, paragraph 4th, which provides that "no person shall be admitted a member of the Society who *professes to cure diseases* by Spiritualism, Homœopathy or Thomsonianism;" in other words, who professes to practise in accordance with the exclusive dogmas indicated by these terms. Now, if to do this affords reasonable cause for exclusion from membership, *a fortiori* it affords reasonable cause for expulsion therefrom. Who does not acknowledge gross and manifest inconsistency in permitting a Fellow of the Society to commit with impunity the same act which, were he not already a Fellow, would render him ineligible to membership? To expel a Fellow of the Society because he has been convicted of a certain act is no more unjust or illegal than to exclude a candidate for admission for the same cause. If the Society may lawfully do the one, it may lawfully do the other also; if the one is unjust and illegal, the other is also. That the Society is competent to do either cannot be disputed on any tenable ground. That the positions thus far maintained by the writer are correct is virtually admitted by the Journal, although it endeavors to escape from the conclusions which inevitably follow by attempting to pervert the meaning of the resolution. "The force and purpose of the resolution," so the Journal affirms, "are to expel those who embrace the doctrine" formularized in any exclusive dogma. This is purely an assumption, neither supported by facts nor warranted by the language of the resolution.

With equal truth it might be assumed that the force and purpose of the statute against adultery are to punish not only those who commit the overt act or crime of adultery, but those also (and such there are) who hold that adultery is an agreeable diversion.

If the assumption of the Journal were correct, the purpose of the resolution would indeed be not to forbid members from committing an act injurious to the Society and to expel them therefor, but to subject them to a tyrannical persecution for opinion's sake. That this is the purpose of the resolution, or that its language can be fairly construed to mean this, none but the Journal and the parties at whom the resolution is aimed, will pretend. Who doubts that a member of the Society may hold that "the moon is made of green cheese?" Who denies that he may believe that the solution of a single grain of table salt in a body of water having a volume greater than the sum total of the matter composing the universe will so impregnate the same with medicinal virtues that a single drop will suffice to cure the itch? Who claims that a candidate may be justly excluded, or that a Fellow may be justly expelled on the ground of his holding these or any other theoretical views, however heterodox or absurd? It is for *acts* not *opinions* that the Society may hold its members responsible. It is against *acts* and *acts* only that the provisions of the By-Laws are directed. Thus, an individual "who publicly advertises for sale, &c., any medicine the composition of which he keeps a secret," commits an act; if "he offers to cure any disease by any such secret medicine," he likewise commits an act; for either of these acts, "if a Fellow of the Society, he shall be liable to expulsion." "Any attempt to disorganize or to destroy the Society" is an act, which renders the perpetrator liable to expulsion. "To profess to cure diseases by Spiritualism, Homœopathy or Thomsonianism" is an act, which renders a candidate ineligible to membership. Observe—the ineligibility arising from this cause is predicated not upon the holding of objectionable views, *but upon the commission of an act, viz., "to profess to cure diseases" in accordance with certain so-called methods.*

In like manner to "publicly profess to practise in accordance with any exclusive dogma" is an *act*, and one, too, which, in the nature of the case, must affect the Society either for good or for evil, whether for the one or for the other it is for the Society to determine. In the latter event, that is, if the act is pronounced injurious, the Society indubitably possesses the power and authority to prohibit the same on pain of expulsion or whatever penalty it may lawfully inflict.

To the triumphant inquiry of the Journal: "If the Homœopaths should at any time obtain a majority of the Society, would it be thought reasonable and within their legal powers to exclude or expel all other practitioners?" I answer, unhesitatingly, Yes, any member or members of the supposed minority who should PUBLICLY PROFESS *to cure diseases in accordance with any exclusive dogma*, as, for example, ALLOPATHY.

In what way the expulsion of a Fellow for the cause stated in the resolution may be lawfully effected, is another and very different question, and the last which I purpose here to consider.

Although the Society is clothed with authority which it may exercise in a lawful manner, it cannot be denied that an individual member is in possession of rights of which he can be deprived only in the same manner. One of these rights may be that he cannot be punished for an offence for which he has not been formally tried and convicted. It may be true, therefore, that one or more members cannot be summarily ejected by the passage of a resolution such as was adopted at the annual meeting in May. That such resolution practically amounts to nothing but an expression of opinion, is quite possible. That to procure this expression of opinion was the object for which the resolution was brought forward, is also quite possible. *But that the Society may make and enact a By-Law forbidding any member to "publicly profess to practise in accordance with any exclusive dogma," and that to the infraction of this By-Law it may attach the penalty of expulsion, must be conceded.*

Having disposed of the questions of possibility and legality there remains the question of expediency, apparently an important one in the estimation of the Journal. To this question I shall briefly allude. When the *honor* of an individual or a Society is at stake, considerations of expediency affect none but sordid minds. The "grave doubts," referred to by the Journal, are entitled to trifling weight in view of the friendly attitude towards irregular-regular practitioners maintained by the great majority, as well as the most influential of those who profess these doubts and the peculiar advantages to themselves accruing therefrom. That neither the doubts nor the advantages are shared by the majority of the Fellows, is evident from the unanimity with which the resolution was adopted.

While, therefore, I would ostracize no man for opinion's sake, while I will maintain that both the medicine and the dose should be left to the judgment of the practitioner, I differ *toto cœlo* from the advocates of the traditional policy pursued towards those whose connection with the Society, it is agreed, is anything but advantageous and reputable.

Exclusive dogmas have in all ages proved not merely hindrances to the progress of scientific medicine, but the favorite and most effective weapons of quackery. There is not one such dogma to-day extant which is not put to this use. He who professes to practise in accordance with such is of necessity affiliated with charlatans. Besides, he forgets or ignores the truth enunciated in the preamble of our Charter (to which the Journal alludes as "affording little to aid members in this emergency," although in my opinion it sheds a flood of light upon it), viz., that it is "medical institutions founded on liberal principles," as well as "encouraged by the patronage of law," which are universally acknowledged as a benefit.

He whose knowledge of the art and science of medicine, and whose method of practice is, by his own confession, narrowed to a single formula, furnishes satisfactory evidence that either the "liberal principles," to inculcate and perpetuate which the Society was founded, are to his apprehension but as a sealed book in an unknown tongue, or that, having been educated in these principles, he has seen fit to abjure them.

The time has come when the Society should refuse to hold fellowship with such, not because his opinions are at variance with the majority, but because by publicly professing to practise in accordance with one or another exclusive dogma, he as publicly fraternizes with ignorance, empiricism or worse. The time has come, too, when that noble system of regulations, the Code of Ethics of the American Medical Association, already formally adopted by the Society, should be recognized here, as elsewhere, as the supreme authority for the government of the profession, and when any contradictory provisions in our existing By-Laws should be, at the earliest opportunity, repealed.

A French Society has been organized, the members of which bequeath their bodies to the college dissecting rooms.—*Richmond and Louisville Medical Journal.*

Selected Papers.

ON THE INFLUENCE EXERTED BY CHLORAL ON THE PAIN OF PARTURITION.

By E. Lambert, Esq., Paris, late House-Surgeon in the Maternity Hospital, Edinburgh.

The subject to which I have the honor of drawing the attention of your Society will possess a peculiar interest in your eyes from the fact that it is directly connected with the name of one so justly memorable as Sir James Simpson. It will command this interest at least, that it purports to bring before you and before the profession the facts known to myself in connection with the later researches of Sir James Simpson in the direction of "obstetric anæsthesia," and I cannot but hope that it may be in the power of others to supplement these by many other observations.

I deeply regret that the few facts here narrated could not be brought collectively under the cognizance of his master-mind, and that I was not permitted to take counsel of his mature experience as thoughts forced themselves upon me during the prosecution of these researches.

When chloral was brought before the profession, Sir James was foremost in prosecuting inquiry into its therapeutic value. I do not know whether he had applied it in private obstetric practice, but his paper on chloral, of 1st January, in the *Medical Times*, makes reference to the subject. He states that he has seen the parturient womb contract regularly whilst the patient was unconscious. During the last fortnight of the year 1869, he had attended, with my colleague Dr. Walker, a case in charge of Dr. Somerville, but I have no notes of the results. On the 31st December I requested his attendance; the case is related under No. I.; there was absolute intolerance of the medicine. The next case occurred 2d January, 1870, and the important results given in No. II. were observed. The last case attended by Sir James Simpson, in connection with the Maternity practice, dates 4th January, No. III. Chloral, it was apparent, could not claim to supplant chloroform, since it abolished consciousness to a less extent, placing the patient as it were midway between consciousness and unconsciousness, and rendering her incapable of that control which is essential during the second stage; but this admission only placed in a stronger light the admirable properties of the agent when applied to the relief of pain during the first stage of labor, at a period when it is generally conceded that chloroform is hurtful.

As *the* hypnotic of this first stage, chloral stands as yet unrivalled; we have only to remember that opium, our only sure refuge, must be administered with the knowledge that we are conspiring, though for a higher end, against the course of labor.

It is with an earnest wish to further the progress of our art that I invite the attention of your Society to the bare statement of the whole facts which have come under my observation. None more than yourselves will feel the interest that attaches to researches in this particular direction—none, I am sure, will be more anxious to employ the keen edge of criticism to the profit of experimental science.

[Here follows a series of cases, illustrating the use of the drug. We are obliged to omit them for want of space, giving only one as an example.]

Agnes P., aged 22. Primipara. Admitted to the Maternity Hospital at 6 P. M., 2d January, 1870. At 7.30, the os was the size of a half-crown; the head, first position, was entering the pelvis, the membranes entire. The pains were strong, at very regular intervals of five minutes. In the intervals of pain has constant slight rigors, which become much stronger during the pain. At 9.25 the membranes ruptured spontaneously, and at 9.30 the head was on the perinæum.

Sir James Simpson attended at 9.50; chloral ʒi. was then administered. 9.55. Says she feels the pains less. At 10, ʒi. again given; the rigors ceased, and the patient seemed to sleep in the interval of a pain. At 10.4, she is remarkably calm. At 10.9, there was a slight rigor, then a severe pain, and a sharp cry; and at 10.10 the head was born. Answered questions; said the pains were much less severe since she took the medicine, and that she slept in the intervals. 10.30.—Sleeping very quietly, answered a question and fell off again immediately. Removed placenta from vagina without any indications of consciousness on the part of the patient. 3.30.—Woke and said, "where am I?" Hearing her child cry, said, "whose child is that?" Did not remember birth of child; took food, and slept soundly till morning. Questioned next morning, she affirmed that she only remembered looking up and seeing three doctors; remembered taking the medicine and nothing more; knew nothing of the birth of the child.

Dr. Gordon accompanied Sir James Simpson. She made an excellent recovery. Her child had spina bifida. The case was reported to the Society by Dr. C. Bell. Chloral was administered to the infant, whose horrible cries were quieted by it; the spasms were also stopped by its influence.

Is it just to incriminate chloral when we want any correlative proof that it has any tendency to affect injuriously uterine contraction? Before offering any conclusions, I have to add a few remarks on the administration of chloral, presuming that their importance is only secondary in place and not in degree. Sir James Simpson insisted strongly on the influence of external impressions upon the character of the anæsthesia under chloroform, and his rules should be more stringently enforced in the exhibition of an anæsthesia of less potency. What we aim at with any medicine is the attainment of a desired end, with the use of the smallest possible quantity. This is especially urgent with a remedy administered by the mouth. Choral, too, has a very complex action; capable of suppressing reflex action and also consciousness, it seems, *when given in excess*, occasionally to exercise a stimulant action on the cerebro-spinal system, producing disagreeable effects, not compatible with its introduction to private practice; effects, however, be it said, transient and never dangerous.

On this account it is imperative that the patient be surrounded by conditions tending to perfect repose of mind and body; and when there has been previous excitement, we must proceed very cautiously. For the attainment of so delicate a result as anæsthesia—"Thus far and no farther"—great care is required, and we must do with chloral as we do with chloroform, administer it tentatively by fractional doses. I have sat for two hours by a pregnant patient brought into the Maternity in the middle of the night, in consequence of severe vomiting; and I have given chloral in successive small doses, watching the case until I knew that perfect rest had been induced; and the next morning, after sound sleep, the cure was perfect. The first successful case I saw treated by Sir James Simpson (Case II.) was a type of good practice, but it was favored, as no other case has been since, by the general condition under which it occurred—"a quiet nature of woman," I have said, "devoid of excitability—a private patient in the hospital, not surrounded by half-a-dozen tattling drones, or curious mutes." Perfect quiet; night time. Case VIII. offers an exact counterpart of this; the conditions there were most unfavorable for the trial.

In the homes of our Scotch laboring classes, the chamber of a parturient woman is the resort of all the gossips who can gain admittance; whilst the absence of almost every comfort is rarely pushed to the extreme limit of abstinence from stimulants. I made mistakes when I began to experiment, and this warning, if necessary, will prevent their repetition. Cases IV. and VI. were especially refractory, from causes above mentioned. The production of anæsthesia is favored by all that lulls the senses. I have failed at the Maternity to quiet a wilfully noisy, garrulous patient, even with chloroform, given for nearly an hour to the extent which is permissible in parturition. Chloral given in massive doses to an excited patient, whilst it stupefies consciousness, intensifies reflex irritability, —Case VIII.;—or where it quiets reflex action, may awake unconscious cerebral activity—Case X. Persons present at the administration of anæsthetics in midwifery should therefore be competent to understand suggestions or obey instructions.

Noise must be suppressed; no talking on the part of the patient encouraged; her movements controlled without violence. Examinations and any operative interference should be avoided.

When anæsthesia has been complete and prolonged for some hours, the bladder must be emptied; and it would be advisable, when using the catheter or making a vaginal examination, to avoid the induction of reflex action by giving a few whiffs of chloroform.

Conclusions.

1. Chloral is an agent of great value in the relief of pain during parturition.

1. It may be administered under favorable circumstances during and at the close of the second stage, with the result of producing absolute unconsciousness in the same sense in which we understand unconsciousness under chloroform.

3. When thus given successfully, it has this advantage over chloroform, that it requires no interference with the patient.

4. It is desirable to retain chloroform in the position which it at present occupies in midwifery, and to reserve for the agency of chloral the first stage of labor. If, however, chloral or some agent having analogous properties is found successfully to relieve the pain of uterine contraction, the use of chloroform will be restricted to a lesser period of the duration of labor, or to the facilitation of manual or instrumental interference.

5. It is demonstrated that a labor can be conducted from its commencement to its termination, without any consciousness on the part of the patient, under the sole influence of chloral.

6. The exhibition of chloral in nowise interferes with the exhibition of chloroform.

7. The proper mode of exhibiting chloral is in fractional doses of grs. xv. every quarter of an hour until some effect is produced; and according to the nature of that effect the further administration is to be regulated. Some patients will require doses of ʒi.; and it is better to produce an anæsthetic effect by ʒiii. given in the space of two hours than by ʒi. given singly.

8. The effects of chloral are continued beyond the period of completed parturition, and the repose experienced by the patient after her labor is one of the favorable circumstances to be noted in considering its application to childbirth.

9. Any stimulating effects, in the form of general excitability, occasionally observed during the administration, have passed away very rapidly.

10. Chloral not only does not suspend, but rather promotes uterine contraction by suspending all reflex actions which tend to counteract the incitability of the centres of organic motion.

11. Labors under chloral will probably be found to be of shorter duration than when natural, for unconscious contractions appear to have more potent effects than those which are accompanied by sensation of pain.

12. Experiments are required in order to determine whether there exists the same antagonism between ergot and chloral as is known to exist between strychnia and chloral.

13. The general conditions under which chloral is to be administered are the same as those which regulate the administration of chloroform, and the rules laid down by Sir James Simpson in connection with this subject must be rigidly adhered to.—*Edinburgh Medical Journal.*

Cancer a Disease of the Nervous System.—Dr. B. W. Richardson (*Am. Jour. of Insanity*) asserts that cancer is primarily a disease of the nervous system, and that the local change we call cancer, with the ulceration which caps it, is the equivalent of the change and death of part after complete arrest, produced by division of nervous communication.—*New York Medical Record.*

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The Practice of Medicine. By Thomas Hawkes Tanner, M.D., F.L.S., Member of the Royal College of Physicians, &c. Fifth American from the Sixth London Edition. Philadelphia. 1870.

A Treatise on the Theory and Practice of Obstetrics. By Wm. H. Byford, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in the Chicago Medical College, &c. New York. 1870.

The Physical Exploration of the Rectum; with an Appendix on the Ligation of Hæmorrhoidal Tumors. By William Bodenhamer, A.M., M.D. New York. 1870.

We have received the above works from the "Old Corner Book Store," and give them all the space at our command.

The first has already been fully reviewed in the Journal; it is simply a new edition of the well-known and valuable work of Dr. Tanner, with such additions as the advance in our knowledge of diseases and their treatment naturally demand.

The work of Dr. Byford's offers an excellent text book for the subject which it treats of. Were it not that we have so many excellent hand books on the same topic we should consider its appearance as very favorable; however, it will take its place with other similar works as a reliable guide. It is well, thoroughly and carefully written, and is illustrated by a series of plates, mostly new, and some of them showing points not hitherto expressed.

The author of the next is already favorably known in the profession for his diligent researches in a department of surgical science which, for reasons sufficiently obvious, is generally slighted in practice. His publications on "Anal Fissure" and on "Congenital Malformations of the Rectum and Anus," have taken an authoritative position in the literature pertaining to those subjects.

This volume is a companion-work to those monographs. In well-chosen language the author first describes in detail the anatomy of the rectum and anus, and then proceeds to elaborate the rules for the exploration of those parts, including the manual examination and the use of instruments—bougies, sounds, the speculum and the endoscope.

In an Appendix, the operation of the author for the ligation of hæmorrhoids is described. His modifications of the ordinary proceeding consist in the use of a fine ligature, not too tightly drawn, and in selecting the point of ligation so as to include no tissue save that of the new growth.

The whole work bears witness to the diligent and original investigations of a scientific observer. It is "respectfully addressed to the student and junior practitioner," but we feel sure that it contains many new ideas and practical suggestions which the profession in general will peruse with pleasure.

A Manual of Clinical Medicine and Physical Diagnosis. By Thomas Hawkes Tanner, M.D., F.L.S., &c. Third American Edition, Revised and Enlarged, by Tilbury Fox, M.D. Philadelphia: Henry C. Lea. 1870. Pp. 366.

This edition of Dr. Tanner's well-known manual has been revised and enlarged by Dr. Fox. Important additions have been made to the medical anatomy of regions and organs, and all the new instruments and improved methods of diagnosis are sufficiently explained. The administration of ether is not referred to at all, while half of the brief article on chloroform is occupied by precautions against accidents and means of resuscitation. Some sections of the book, as that on Clinical Examination of the Insane, will not apply to this country; yet, taken as a whole, it is the most compact *vade mecum* for the use of the advanced student and junior practitioner with which we are acquainted. T. W.

Manual of Chemical Examination of the Urine in Disease. By Austin Flint, Jr., M.D. New York: D. Appleton & Co. 1870. Pp. 76.

This little volume is all that it professes to be. By its aid the practical physician will be able to elucidate all ordinary cases of urinary disease without recourse to the specialist. The reagents and apparatus which Dr. Flint has found most convenient for daily use are described, and an excellent series of tables at the end of the book are arranged to be cut out and posted up in the laboratory for reference during quantitative analyses. T. W.

Neuroma.—The term neuroma (tumor of nerve), or rather *neuromes*, was first employed by M. Odier, of Geneva.

Medical and Surgical Journal.

Boston: Thursday, September 22, 1870.

THE RAISING AND EDUCATION OF FOUNDLINGS.

Dr. Jacobi, of New York, a member of the Medical Boards of the Infants' Hospital, Randall's Island, and of the Nursery and Children's Hospital, has laid before us, in pamphlet form, a valuable mass of information relating to the "Children of the State" in Europe, with a description of the methods employed by the various countries for saving the lives of foundlings and for rearing and educating them—a comparison, in fact, by figures, between the farming method of one country and the institution system of another. In the former method the infants are received, without question of parentage or condition, and are farmed out at once to worthy country people, with whom they remain till they are of age, or are otherwise apprenticed. They thus become, in fact, children of the State, and children and State become mutually dependent on each other. The institution method, known as the Germanic or Protestant, is that usually employed in our own country, and is well known. Both methods have for their object the saving of life and the raising of children into healthy men and women; their salvation is the country's good.

We have not space for extended data, but we make a few quotations in order to give the results at which Dr. Jacobi arrives in this question of so much interest to us as physicians and philanthropists.

"The great question, which system of raising infants is preferable, has not been answered in a manner satisfactory to all, it appears, for a good reason. There is a period in which the raising, the keeping alive, is of paramount importance and of great difficulty, and another one, in which the danger to physical existence is less imminent, but that of moral and mental degeneration more prevalent. Under all circumstances, the number and frequency of diseases is most overwhelming in early infancy, while both diseases and mortality diminish rapidly after a certain time, say after the sixth year. As a rule, the mortality is but one-tenth, between the sixth and fourteenth year, of that under six years. Thus I should ask the following questions:—

"How and where, in large institutions or in private homes, ought infants and children to be raised up to their sixth year?

"And: Is raising and education of children over six years easier, or preferable, in large institutions or in private homes?"

Dr. Jacobi enters into a series of statistics regarding the inmates of the Nursery and Child's Hospital, summing it up as follows:

"Now, then, there are ten deaths quarterly in 80 children, each one 4–5 months old at the date of admission. Grand total of 50 per cent. deaths yearly of children of 4–5 months and upwards to two years.

* * * * "The worst figures of the European foundling hells of former centuries are not more fearful than ours, and although being an officer of that institution myself, and believing that I and all the rest of us have conscientiously tried to do our duties, I cannot but testify and bow down to the truth, that in spite of all the efforts of the medical staff, and the painstakings of kind-hearted and self-sacrificing ladies, the probability of the lives of children entrusted to a public institution is very slim indeed. * * *

"Some of the causes of this constantly returning calamity have been given in this paper. The facts are sufficient to justify the abrogation of large institutions designed for the raising of young infants. The facts appear to show besides, that older children (not a single death occurring in 17 of an average age of five years) bear up easily under the same circumstances that are a source of death to the infants. * * *

"The question concerning the best mode of disposing of the children who have reached their sixth year, or the end of their ninth year, must be answered on the strength of the following considerations. The mortality of early age has closed by this time, it being ten times less between the sixth and fourteenth year than what it has been from birth to the sixth year. Therefore there is but little danger in recalling the children from their temporary homes in the country. Experience has taught me, and statistics prove, that mortality in public institutions at that period of life is not large. The reasons are evident. The children are active, their occupation is divided between playing, learning and light work. They are changing about between the playgrounds, dining rooms, school rooms, work rooms and bed rooms. Ventilation, therefore, and a full supply of air are rendered easy. Thus not even the customary requirements of a certain number of cubic feet per head will hold good for institutions of that kind, less space being necessary than in hospitals. Thus there is no doubt that children of that age may be removed from the country to be transferred to their common city homes.

"Thus it appears, that while the earliest period of life requires farming out to private parties in the country, the more advanced age is more benefited by education in larger institutions. The mode of their management may differ in many respects. There may be a difference of opinion regarding the choice of small or large institutions. Some are in favor of uniting a limited number of children under the superintendence of a teacher, who, at the same time, is the superior of the common household. Some, however, favor large institutions. This much is certain, that whatever plan is followed concerning the education of children after their sixth year, the recalling them from the country homes ought to be considered as preferable to their remaining in seclusion."

NOTHING IS LAW THAT IS NOT REASON.

It was the implied pledge of the Editor of the Journal, in July last, to open its pages to the profession for fair discussion of any proper technical subject, so long as such discussion should be confined within reasonable limits of language and space. Unwilling to depart from a position which we feel to be, at once, an impartial and honest one, we have given space to the communication of Dr. Sullivan on the Resolution adopted by the Massachusetts Medical Society at its annual meeting.

The assertions of Dr. Sullivan in support of his theory of the rights and privileges of the Massachusetts Medical Society will, it is to be hoped, be compared with our Editorial on the subject, which we believe will satisfy any reasonable mind as to the question of our sympathy, support or defence of a class which we most emphatically denounce, to wit, quacks. We deem the subject one of vital importance, not only to the Society, but to the profession at large, and are equally anxious with Dr. S. that there should be no misrepresentation. Therefore we endeavored to present an impartial review of the facts bearing on the question at issue, without misconstruction of evidence, relevant or otherwise. In doing this, Dr. S. claims that we have misunderstood the force and purpose of the resolution—that we have perverted its meaning by saying that the force and purpose of the resolution is to expel those who embrace the doctrine, "formularized in any exclusive dogma," as he expresses it. If that is not its force and purpose, Dr. Sullivan must admit that its object was merely to obtain an expression of opinion; granting this, does Dr. S. maintain his ignorance of the fact that the majority of the Society discountenanced quackery before the resolution was passed as well as after?

As to our wandering to the question of "expediency or possibility of accomplishing the end contemplated thereby," we believe that its consideration will compare favorably with that of "green cheese," "adultery" and "table salt." Dr. S. believes that he has disposed of the questions of legality and possibility—this is theory, until proved. It behooves the champion of the anti-homœopathists to support his theories by facts. We think the majority of an interested profession will cordially support and approve acts which will show that quackery is no longer rampant in the ranks of a noble Society. With this reply we leave the matter before the profession.

AMERICAN DEGREES.

We find the following correspondence in recent numbers of our cotemporary, the London *Lancet.*

"Old Subscriber. The step seems decidedly irregular. Is it true that by the payment of a certain fee to an American Consul, the degree of M.D. can be obtained from American Schools?"*

"American Degrees. *To the Editor of the Lancet.*—Sir: In answer to your 'old subscriber,' I would hint that he had better find out whether or no Mr. Motley will accept of the money, and obtain for him the much coveted M.D.

"No, sir. I have the honor of holding the M.D. degree from Harvard University, Boston, U.S.A., which I obtained after completing my study there, and undergoing just as strict an examination as any one would have to do to obtain the qualification from any of the licensing bodies in Great Britain or Ireland, and I am just as proud of it as if I had obtained it in Edinburgh.

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* Op. citat. August 6, 1870.

"Harvard University is the oldest medical school in America, having been founded in 1638, in the old town of Cambridge, Massachusetts, U. S. A. In the year 1828 it had 15 academic instructors; there were 52 graduates, 254 undergraduates, 30,000 volumes in the college and 4,600 in the student's library.*

"If your 'old subscriber' or any one else wishes to obtain any further information with regard to Harvard University, they will obtain a full catalogue by writing to D. Clapp & Son, 334 Washington Street, Boston, U. S. A.

I remain, Sir, yours faithfully,
M.D., F.L.S. and L.M.
August 8th, 1870."†

M.D. has done well in giving the refutation to the implied statement that medical degrees can be obtained for money in our respectable medical schools, and also in giving his honorable testimony to the worth of the University, to which so many of us look as our Alma Mater, both in letters and in medicine.

With a view to setting our English friends right in the matter, and to save our publishers the necessity for correspondence which M.D.'s suggestion has already brought upon them, we give the requirements for graduation which have been adopted by the Faculty of Harvard University.

Extracts from the Statutes of the University.—"Every candidate for the degree of Doctor in Medicine must comply with the following conditions before being admitted to examination:—

"1. He shall satisfy the Executive Faculty that he is of good moral character, and has arrived at the age of twenty-one.

"2. He shall have attended two courses of Lectures delivered at the Massachusetts Medical College by each of the Professors of the departments of Anatomy, Physiology, Chemistry, Materia Medica and Pharmacy, Morbid Anatomy, Midwifery, Surgery and Clinical Surgery, Clinical Medicine, and the Theory and Practice of Medicine; but if he shall have attended a similar course in any other College or University approved by the Executive Faculty, the same may be accepted in lieu of one of the courses above required.

"3. He shall have employed three years in his professional studies, under the direction of a regular practitioner of medicine. [Attendance upon the Summer School and one course of Lectures delivered at the Massachusetts Medical College, entitles the student to a certificate of one year's study.]

"4. If he has not received a University education, he shall satisfy the Executive Faculty in respect to his knowledge of the Latin language and Experimental Philosophy.

"5. He shall have given notice of his intention to the Dean of the Executive Faculty, four weeks previous to the day on which he presents himself for examination, and at the same time shall have delivered or transmitted to the Dean a dissertation, written by himself, on some subject connected with medicine."

At the time of his examination in the various branches of medicine, the applicant pays the graduation fee, thirty dollars. In this manner only can the degree of M.D. be obtained at Harvard University; *it cannot be obtained by purchase, by any person,* whatever may be his qualifications or his previous position. The requirements for graduation are the same or very similar at all the *respectable* American universities and schools of medicine, and at none of them are foreign qualifications of whatever character received in lieu of an examination; nor can the degree be purchased.

We regret that the action of certain irresponsible persons, who have recently offered to obtain degrees (by fraudulent means) from regular universities or from institutions actually non-existent, or, at least, without regular standing, has given rise to reports derogatory to the reputation of our respectable schools.*

RATIONAL MEDICINE IN ENGLAND. *Messrs. Editors,*—To mark the progress of rational medicine, please re-print the following extract from the "*Address on Medicine*," by Francis Sibson, M.D., F.R.S., &c., before the "British Medical Association," at its Annual Meeting, August, 1870. Not many years ago similar ideas, when advanced in this neighborhood, were received with great perturbation by English Journalists as well as by some of our own. The tone of authority in which such ideas are now stated is quite encouraging; axioms could not be expressed in more positive terms. Perhaps some of the disbelievers in progress hereabouts may be influenced thereby. We italicize a few phrases for their especial benefit.

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* We are able to quote somewhat later dates than our friend M.D. gives (1828) in reference to the status of Harvard University. It has now a faculty consisting of 91 professors, lecturers and instructors; 563 students in its Undergraduate department, and 599 in its Professional schools, including 306 in the medical department. From the medical department 68 have been graduated in the past year. The University and Society libraries contain an aggregate of 184,000 volumes.

† Ibidem, August 13, 1870.

* Journal, January 13, and February 10, 1870.

X.

"Whatever may be the treatment adopted for disease, the influence of that treatment on the disease itself is less than the physician is apt to think. The great majority of diseases tend to get well. *They have, so to speak, a life-time of their own, with its periods of growth, maturity and decline.* They are the passing tenants of the body, which they occupy, often with great injury, for a limited time. *Treatment cannot change their nature*—cannot expel them at once—cannot quench them—cannot materially shorten or prolong their existence. But treatment can lessen the sufferings of the body occupied by disease, shield it from outer injury, repair its waste, and support and reinforce its powers; while it can ward off those causes that tend to increase or reawaken the disease, and lessen the intensity of its action, inflammatory or otherwise, especially upon the local structures. To watch, then, the treatment of a disease, is to watch, not, so to speak, the remedy and its immediate effects, but the disease itself, and its behavior during a certain method of treatment."—*London Medical Times and Gazette, Aug. 13th*, 1870.

CHANGES PRODUCED IN THE BLOOD BY EXTENSIVE BURNS, EXPLAINING PULMONARY COMPLICATIONS. By DR. FELTZ, Pathologist at Strasbourg.—In 1867, I showed experimentally, in a work entitled *Etudes des Embolies Capillaires*, that in severe burns there were important changes in the vessels in the neighborhood, and also in the great vessels, but in the latter only as the result of transmission, and in them the changes were only here and there. If hæmorrhagic deposits, more or less numerous, are found in the lungs, there can be little doubt that these are due to the coagulated masses found in the pulmonary veins. In 1861, Dr. Wilks had pointed out how frequently, in children who had been extensively burnt, death was due to pulmonary complications, though at times due to shock to the nervous system or to tetanus. He pointed out that complications, analogous to those found in purulent absorption or pyæmia, were present. In the vessels he showed deposits of fibrine more or less completely decolorized, in organs the frequent existence of hæmorrhagic spots resembling those found in purpura.

Wilks did not point out the relation between the pulmonary morbid phenomena and the lesions in central organs. The factor which he did not recognize I find in the capillary embolisms. This manner of death after burns is also found to follow extensive congelations. Michel (of Strasbourg) has recorded a case in which pulmonary embolisms were explained by the transmission of altered blood from superficial frostbite.

In 1868, M. Gustave Wertheim published interesting observations on this subject. According to him, the lesions observed in the organs after local burns or congelations, such as duodenal ulcers, hepatic, pulmonary and renal hæmorrhages, and even cerebral lesions, are the result of embolisms starting from the locally injured parts.

The following case affords in its autopsy most convincing results as to the mechanism of the pulmonary complications of an extensive burn.

W., æt. 22, robust and strong, fell into a vessel of boiling water. His arms, legs and back were fearfully burned, the cuticle being raised, and here and there separated in enormous blisters, and the exposed skin much reddened. He was admitted in great agony, shivering constantly, and complaining of intense cold. Lotions of chlorate of potash and a free use of opium relieved the symptoms. During the night vomiting and delirium came on, with difficulty of breathing. Next day he was sensible for some hours; but in the afternoon coma came on, with great difficulty of breathing, and he died at midnight.

Post Mortem.—The cuticle was nearly completely separated from both legs. The capillaries of the skin appeared black, and numerous purulent specks were visible in their vicinity. The blood in the small veins consisted mainly of debris of corpuscles, altered in shape and size, and frequent small black clots. The lungs were full of small black apoplectic spots, and careful examination of the blood composing them showed changes in each precisely similar to those already described in the peripheral veins. Had death not been so rapid, doubtless these deposits would have become purulent.—*Gazette des Hôpitaux.*

Atrophy of Skin and Muscles of Forearm. Under the care of Dr. H. S. Purdon.—The following case presents one or two points of peculiar interest, and is briefly recorded:—Jane M'E. æt. 16, admitted at the Hospital for Skin Diseases under the care of Dr. H. S. Purdon, December, 1865, for extensive ulceration of left forearm, supposed to be strumous; duration of disease two years. The patient was a pale, delicate, anæmic-looking girl, had never menstruated, and lived in an unhealthy part of the town. Her relations are all healthy. She could not attribute the disease to any cause. Stated that it began as an "income," which broke and left a small superficial "sore" that had gradually spread to its present extent, in length about five inches and between three and four in width. The ulceration had a peculiar velvety look and feel, secreted a little sanious matter, but gave no pain. The edges were bevelled off, and in color of a violet hue. The treatment prescribed was cod-liver oil and syrup of the iodide of iron, locally zinc ointment and balsam of Peru. After an attendance of three months' duration in which little progress was made, the patient was lost sight of till January, 1870, when she called again to show her arm. She was now much fatter, and stated that after leaving the hospital she went to reside at the seaside when her arm began slowly to improve, leaving, however, a permanent stiffness of elbow joint. About a year ago she began to notice that, in addition to the stiffness just mentioned, there was impaired motion, the arm and hand gradually becoming weaker, and the new cicatricial tissue rapidly contracting. Certainly her forearm and hand presented a most extraordinary looking appearance, the hand being swollen to fully twice its natural size, dense and brawny to the touch, gritting slowly on pressure; the forearm, in *three* distinct places, bound down by a dense hide-like skin of a glossy appearance, resembling the affection known as scleroderma, accompanied by atrophy of the muscles beneath—in fact, nothing but "skin and bone," to use the patient's own expression, and the unaffected portions were bulged out to an unnatural extent. Any treatment except amputation would be of little avail.—*Journal of Cutaneous Medicine.*

Case of Infantile Syphilis in one of Twins. By H. E. Carty, Surgeon to the Liverpool Dispensary for Skin Diseases.—Margaret L. came on the 26th February, 1868, to the dispensary with a child, whose father is a shoemaker. She has had four dead-born children, and has been on treatment for secondary symptoms, though there are none at present visible. The child is one of twins, the other having no eruption or any signs of disease; they are both squalid, evidently badly nourished, and are at present ten weeks old. The child is one mass of scaly venereal eruption, the eyes and nose being especially bad. Owing to the nostrils being stopped up, it has great difficulty in taking the breast. It has been treated for some weeks at the Homœopathic Dispensary. The prognosis was very unfavorable.

There not being any part of the body as large as half-a-crown in any one spot free from scales or inflammation, where the lamina had peeled off, she was directed to anoint the whole body with an ointment of one-seventh of ung. hydrarg. fort. and ung. cetacei, and to give the child one-sixty-fourth of a grain of hydrarg. bichlorid. in ℥i. syrup sarzæ three times a day; also to wean it. On March 1st, the feet being better, gr. x. of ung. hydrarg. fort. was rubbed in every night, and glycerine applied to the flexions of the joints. March 4th—Eruption much better, but covered with varicella. 6th—Face quite clear; vesicular eruption subsiding. April 25th—Child quite free from any visible disease, and better altogether.

July 15th—The child was brought again; the mother, being starving, has had to suckle again. She herself has now ulceration of the throat, and white deposit on fauces. The child has psoriasis syphilitica and sores on the vulvæ, much diarrhœa, and flatulency. They attended some few times, getting gradually better, and then disappeared.

The points of interest in this case are—firstly, the rapidity of recovery from an amazing amount of unchecked disease, and the immunity of the other twin up to the last inspection in the middle of August from the poison the child and the mother suffered from. It also appears difficult to limit to what extent the use of mercury can be carried, not only with safety, but with advantage.—*Ibid.*

There were 187 deaths from smallpox in Paris for the week ending Aug. 24.

Death from Chloroform.—Dr. George Johnson, in a letter to the Editor of the London *Medical Times and Gazette*, writes as follows:—

"Dr. Richardson, in his lecture on death from chloroform, referring to the *post-mortem* appearances in cases of what he designates epileptiform syncope, states that the lungs are blanched and bloodless, the left side of the heart and the systemic arteries empty; while the right side of the heart and the whole systemic venous system are distended. Dr. Richardson explains the appearances thus:—'All through the body there is evidence on the arterial side of the circulation of intense arterial contraction. * * * * the arteries have poured their contents into the veins, and contracting firmly in their minute ramifications have shut up the blood in the veins, and produced complete arrest of motion throughout the circulation.'

"I find a difficulty in accepting this explanation of the facts. It must be borne in mind that the contraction of the minute muscular arteries has a stop-cock, and not a force-pump action, an obstructive and not a propulsive influence upon the circulation. Contraction of the minute ramifications of the systemic arteries would retain the blood in the arterial trunks, and not drive it on into the veins; and, again, driving the blood into the veins would not arrest the circulation if the blood were free to move through the lungs. The condition of the heart, lungs, and bloodvessels, which occurs in animals rapidly killed by chloroform, and which is also found in cases of acute apnœa, and of cholera collapse, appears to me to admit of only one explanation. Contraction of the minute pulmonary arteries arrests the blood before it reaches the capillaries. The closure of the arterial stopcocks in the lungs tends to empty the vessels in front, and to distend those which are behind the seat of obstruction; hence, anæmia of the lungs, and emptiness of the left side of the heart, and the systemic arteries, while the trunks of the pulmonary artery, the right cavities of the heart, and the systemic veins, are distended."

Hypodermic Injection of Ergotin.—The *secale cornutum* has long been employed in midwifery for producing uterine contractions, and thereby checking uterine hæmorrhage; it has also long been successfully employed in nasal and pulmonary hæmorrhage. Quite recently Eulenburg has employed the hypodermic injection of ergotin in pertussis for its alleged narcotic properties. He observed that injections of 1-18th to 1-9th of a grain produced a considerable diminution of the paroxysms, and occasionally vomiting. Drasche has also recently employed the subcutaneous injection of ergotin in pulmonary hæmorrhage, and asserts that it *instantly* arrests the bleeding, and this assertion is so far confirmed by Von Gräfe, that he states that several years ago a nurse in his clinique was seized with so obstinate and severe an attack of hæmorrhage from the lungs as to resist every treatment employed, that he then injected ergotin hypodermically, and from that moment there was no more hæmorrhage. Langenbeck has also employed it in cases of hæmorrhage, and seemingly with benefit, though from compression having been simultaneously employed, the exact amount of good derived from the ergotin was not very readily ascertained. But in the treatment of aneurism by the hypodermic injection of ergotin, Langenbeck has certainly attained most wonderful results. He was led to employ it in these cases from the consideration that its action on the uterus and on the arteries was identical, and consisted in inducing contraction of the inorganic muscular fibres, and he hoped to diminish the aneurism by promoting the contraction of the muscular fibres scattered over it.—*Edinburgh Medical Journal.*

Hypodermic Injection of Morphia in the Vomiting of Pregnancy.—Of all means that I have tried this has proved the most successful. A grain of the acetate is dissolved in half a drachm of water, of which ten minims are injected in the epigastric region, and repeated after one, two, or three hours' interval until relief occurs. Sometimes one injection suffices, but generally two or three, or, it may be, even double doses (*i.e.* one-third grain) are required.—Dr. Baillie, *Indian Medical Gazette.*

Carrying the Obstetric Forceps.—Ellerslie Wallace, M.D., Prof. of Obstetrics in Jefferson Medical College, Philadelphia (*Am. Jour. Med. Sciences*), remarks to his medical class as follows: "I deny the right of any man to attend a case of labor, unless he carries his forceps with him; and I consider that teaching erroneous which says, Go without your forceps, but *send for them* when you see the probable necessity of their use."—*N. Y. Medical Record.*

Medical Miscellany.

Dr. William T. Lusk, recently appointed Lecturer in the Medical School of Harvard University, comes to us recommended in the strongest terms by leading practitioners and teachers in New York, by Profs. Fordyce Barker, Austin Flint, Jr., and others. He has already delivered two eminently successful courses of lectures at the Long Island College Hospital, and is spoken of by the best judges as preëminently qualified as an experimental teacher.

We can promise Dr. Lusk a cordial welcome on the part of the Faculty and the profession, and look forward with much interest to the new and enlarged course of instruction to be offered the students of the coming winter.

To Whom it may Concern.—We are requested to call the attention of the members of the Massachusetts Medical Society, who may be interested, to the advertisement of the Committee on "the Report of the Delegates to the American Medical Association, the counter statements of Dr. John L. Sullivan, &c.," in reference to a meeting of that Committee on Saturday next.

We call attention to the valuable opportunity offered in our advertising columns to a young or middle-aged physician to establish himself at once in a first-class practice.

An Interesting Experiment.—Dr. Richardson recently delivered the concluding lecture of his course on Experimental Medicine for the session 1869-70. It was remarkable for a very curious experiment, which appears to show that there is a direct and almost immediate passage of substances in the gaseous form through all the tissues of the body, and especially through the coats of veins. Dr. Richardson introduced a fine tube through the nostril of a rabbit into the cranial cavity. Air, or carbonic-acid gas, pumped through this tube, instantly made its appearance in the right cavities of the heart. The carbonic acid darkened the blood and stopped the systolic action. Atmospheric air rendered the blood of the right side arterial, and restored the systole. At some future time Dr. Richardson promises to announce the results to which he may be led by following out this line of inquiry.—*Lancet.*

A Description of the Discoverer of the Blood Circulation.—Aubrey says of Harvey: "He was not tall, but of the lowest stature; round-faced, olivaster (like waintscott) complexion; little eie—round, very black, full of spirit; his hair was black as a raven, but quite white twenty years before he died. I remember he was wont to drink coffee, which he and his brother Eliab did, before coffee-houses were in fashion in London. He was, as all the rest of his brothers, very cholerique; and in his younger days wore a dagger (as the fashion then was); but this doctor would be apt to draw out his dagger upon every slight occasion. He rode on horseback, with a foot-cloth, to visit his patients, his man following on foot, as the fashion then was, was very decent, now quite discontinued."—*N. Y. Med. Record.*

The Theory of Convulsions.—Professor Mantegazza (*Gaz. Lombard*) found that when rabbits are so far curarised that contraction of the voluntary muscles has ceased, convulsions are produced by the injection of concentrated urine, or a solution of urea, into the jugular vein. When from such a rabbit a muscle is cut out, which no longer contracts on the application of galvanism, and dipped in a solution of urea, it begins to contract spontaneously. He therefore concludes that urea is a direct stimulant to the muscular substance. On this supposition, he thinks that convulsions may be divided physiologically into three kinds. 1. Central convulsions, as in tetanus, tumors of the central nervous system, &c. 2. Peripheric convulsions in traumatic neuralgia, neuroma, &c. 3. Idio-muscular convulsions in uræmia, and perhaps under the influence of special poisons in the blood.—*Ibid.*

To Correspondents.—Communications accepted:—Modern Medicine.—Amputations; Combination Plan.

Erratum.—Page 159, second column, line fifteen, for "articulation" read *dislocation.* Page 152, first column, last line, for "whenever" read *wherever.*

Pamphlets Received.—Constitution and By-Laws of the Medical Society of the District of Columbia, with the Act of Incorporation and List of Members. Pp. 21.—The Alleged Mal-practice Suit of Walsh *vs.* Sayre. New York.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending Sept. 17, 1870.

Cities and towns.	Total.	Prevalent Diseases Cholera Infantum.	Consumption.	Dysentery and Diarrhœa.	Typhoid Fever.
Boston . . .	135	15	12	11	9
Charlestown	14	2	1	2	0
Worcester .	23	4	1	2	0
Lowell . . .	20	3	2	0	2
Milford . . .	5	0	1	0	0
Chelsea . . .	3	1	0	0	0
Cambridge .	17	7	4	1	1
Salem	9	2	1	0	0
Lawrence . .	9	0	1	0	3
Springfield . .	6	0	2	1	1
Lynn	19	7	2	0	3
Taunton . .	14	2	4	2	0
Newburyport	4	1	1	0	1
Somerville . .	4	2	0	0	0
Fall River .	19	2	2	4	0
Haverhill . .	3	1	1	0	0
	304	49	35	23	20

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Sept. 17th, 135. Males, 73; females, 62. Abscess, 1—accident, 2—apoplexy, 4—inflammation of the bowels, 2—congestion of the brain, 4—disease of the brain, 6—bronchitis, 4—cancer, 6—cancrum oris, 1—cholera infantum, 15—consumption, 12—convulsions, 1—croup, 2—cyanosis, 1—diarrhœa, 8—dropsy, 1—dropsy of the brain, 1—drowned, 1—dysentery, 3—epilepsy, 2—scarlet fever, 3—typhoid fever, 9—hæmorrhage, 1—disease of the heart, 5—intemperance, 1—disease of the kidneys, 1—disease of the liver, 2—congestion of the lungs, 1—inflammation of the lungs, 3—marasmus, 7—old age, 5—paralysis, 2—peritonitis, 3—premature birth, 1—scalded, 1—suicide, 2—unknown, 10—whooping cough, 1.

Under 5 years of age, 50—between 5 and 20 years, 11—between 20 and 40 years, 27—between 40 and 60 years, 21—above 60 years, 16. Born in the United States, 101—Ireland, 20—other places, 14.

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RHEUMATIC ARTHRITIS OF COXO-FEMORAL ARTICULATION. SPONTANEOUS DISLOCATION ON DORSUM ILII. REDUCTION AFTER SEVERAL MONTHS.

By Francis H. Brown, M.D., Boston.

Mary D., aged 8, entered The Children's Hospital July 28, 1869. She was, to appearance, a feeble, poorly nourished child, and was evidently much reduced by several months' illness. The history of her case was somewhat indefinite, as her parents, though seemingly intelligent, gave no clear account of the early stages. As far as could be ascertained, she fell on the ice in the previous February, without, however, much apparent injury. Early in March, she was attacked with acute rheumatism, general in its character and not alone in the joint affected on entrance into the Hospital. The evidence regarding the nature of the disease is definite and fixed; it could have been nothing except an attack of rheumatism, pure and simple. She was confined to bed three and a half months. During the latter part of the time she laid with her legs strongly flexed. At this date, which the mother puts at June 15, the distortion at the hip was seen, as at the time of entrance to the Hospital. She could not stand, nor was she removed from the bed to the floor from March 1 to the middle of June, at which time the distortion was noticed and the other signs of dislocation were apparent, as at the time of reduction.

Oct. 4, seven months from the commencement of the rheumatism and three and a half from the completion of the cure of that disease, I found the patient in bed, and in the following condition. She had recovered the general aspect of health; her spine was nearly straight; she had walked for four weeks about the ward and the whole Hospital, though in a crippled condition, as expressed further on, and had joined in play with the rest of the children. While lying in bed, as well as when held up with the legs pendant, there was shortening of two and a quarter inches of the right leg, by careful and repeated measurements. The toes pointed under the instep and at times behind the heel of the left foot. The patella was directed to the inner aspect of the left thigh above the left patella. Under ether, the head of the right femur was felt behind the acetabulum, and its normal position was vacant. The trochanter was very prominent, and the right buttock flattened laterally. The leg could not be rotated outward. On walking, she bent the right knee, to enable the left foot to reach the ground; carried the right side of the pelvis out and *round*, rested on right foot without pain and reached left leg again by a kind of spring, bringing forward the right foot again, even more inverted than when standing or lying. The right groin was much distorted, as if drawn up; the right labium almost obliterated. *The physical signs remained unchanged on giving ether.* The leg could be flexed, rotated inward, abducted and adducted, but could not be carried back of the longitudinal axis of the body.

The patient was etherized; the adhesions were broken up by means of forcible ab- and adduction and rotation; the pelvis and body of the child were then held by assistants, and, by flexion, adduction, external rotation and by some immediate pressure on the head of the bone,* it was brought below the acetabulum, when, by lifting the limb, while still flexed, the head was restored to its normal position. A snap† was *felt* by my hand as the head passed over the brim of the acetabulum, but was inaudible to the bystanders; the *sensation* was not so much that of the bone snapping sharply into place, as might be expected in a recent dislocation, but rather its passing over a prominence into a socket partially filled, as might be supposed, with new tissues. On extending the leg, the length was very nearly restored, the leg being, by contraction of fibrous tissue and tendons, a little flexed; the toes and patella pointed naturally forward; the trochanter was restored to its normal prominence; the groin and vulva became natural.

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* Bigelow. The Mechanism of Dislocation and Fracture of the Hip. Philadelphia, 1869, p. 58.

† Dupuytren. On the Injuries and Diseases of Bone. London, 1857, p. 380.

A broad belt was passed around the pelvis, with compress behind the head of the bone; extension was obtained from above the knee and a moderate weight applied. The patient remained in bed, with the extension apparatus applied, for three weeks, and for a few days longer without apparatus. About Nov. 1 she began to bear her weight on the leg, and in a few days was walking easily and with only so much limp as might be due to long disuse. Left the Hospital Nov. 23d.

September, 1870, she now walks without trace of lameness, and uses her limb with as much freedom and ease as any girl of her age.

The case of Mary D. is put on record as so much evidence to disprove the assertion that dislocation of the femur cannot occur as the result of rheumatic arthritis; and as another example of the few cases on record of reduction of the femur after long-continued displacement—the effects of the original disease of the hip having passed away—this reduction being effected by the method which Dr. Bigelow has treated of in his monograph.

I am not ignorant of the authorities on the one side and the other, when I call this a case of spontaneous dislocation of the femur, the bone being in its normal condition and without caries, absorption or other removal of the head. I therefore propose to hold to my assertion to that effect, and will quote some of the authorities on the subject—not *compilers* alone, but actual *surgical observers*.

Dr. Alden March, in his paper presented to the American Medical Association, and published in their Transactions, begins by saying:—"I shall take the position that *spontaneous dislocation of the hip* (as purely the result of morbid action, unaided by superadded violence) seldom or never takes place."* Again he says:—"I came to the conclusion that all the usual symptoms of a dislocation, such as are commonly relied on during life as diagnostic of an idiopathic dislocation, could be accounted for and satisfactorily explained, at least to my mind, in the strongly marked organic changes in the form and relations of the head of the femur and acetabulum, without the existence of such an accident. * * * * I shall rely upon nothing but *post-mortem ocular demonstration*."* The latter assertion Dr. March uses to meet the cases and arguments of several authorities on the subject. "I am sustained in my views as respects spontaneous dislocation of the hip by one of the most minute, experienced and accurate pathologists in the United States; I refer to Dr. J. B. S. Jackson, of Boston, who has in his pathological collection four or five strongly marked specimens of hip disease, and, in almost every respect, corresponding with my own."†

In opposition to the views of so accurate an observer as Dr. March, we find the opinions of some of the best surgeons of the past and present. Charles Bell, perhaps better than any other one, describes the method of dislocation which seems to me most rational in this case. He says:—"Whenever there is any, the slightest degree of inflammation of the hip-joint, whether it proceed from an injury or be a spontaneous and constitutional inflammation, there is an inclination of the pelvis on the head of the thigh bone; and the inclination of the trunk from the line of the thigh bone increases in proportion to the degree of inflammation. At last, the disease continuing, the affected leg and the trunk will form an angle of 45°, and the head of the femur will be raised upon the lip of the acetabulum and prepared to start out of the socket altogether. A ligament, to be firm and white and strong, must have only its natural degree of vascularity; but if it be inflamed, with its increase of vascularity, it becomes of a gray color and softer, and loses its power of resistance. This condition of the ligament permits dislocation, but does not cause it. It is the inclination of the body and the leg which throws out the head of the bone from the socket, and owing to the softening and yielding of the ligaments, there is no check or limit to the distortion, and thus dislocation is consequent on injury."‡ One or two additional remarks complete what appears to me the most accurate description of this dislocation. The injury should perhaps hardly be ascribed solely to the inclination of the body; it is undoubtedly that which brings the head of the bone to the upper and back part of the acetabulum and finally to its edge; but the action of all the muscles which are inserted into the femur, acting continuously on the thigh under this disadvantage, draw it up against the length of the thigh, forcing it up and over the edge, and so produce the dislocation. Bell does not refer to those cases where the head of the bone is retained at or near the edge of the acetabulum, causing partial absorption at that point and the condition known as subluxation. He also omits to speak of the rupture of the capsule when dislocation takes place or its being forced forward before the advancing head and forming a pocket for its lodgment outside the acetabulum.

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* March. Transactions American Medical Association, vol. vi. p. 479.

* March. Transactions American Medical Association,

† Ibidem, p. 497.

‡ Bell. Observations on the Injuries of the Spine and of the Thigh Bone, London, 1824.

Brodie gives the autopsy in the case of a man dying of hip disease, in which the condition of the hip was found to be as follows :—"The head of the femur was lodged on the dorsum of the ilium. The capsular ligament and synovial membrane were much dilated; and at the superior part their attachment to the bone was thrust upwards, so that, although the head of the femur was no longer in the acetabulum, it was within the cavity of the joint."[*]

Dr. N. R. Smith also says :—"So active a part do muscles perform in effecting dislocations that, not infrequently, they alone, when convulsively acting, luxate important articulations. * * * The hip is also dislocated at the moment of the production of very slight distortion by the action of the very powerful muscles concerned in the motions of the femur. * * * The final dislocation of the bone from its natural position I believe to be in almost all cases effected by the action of the muscles alone."[†]

Brodie also says :—"At other times the shortening of the limb takes place in another way. The cavity of the acetabulum is filled up by lymph or pus, or by lymph and pus together; the capsular ligament of the joint in consequence is dislocated. Then the round ligament is destroyed by the ulceration which has already consumed the cartilage. The head of the femur is pushed from the joint until it passes beyond the margin of the acetabulum, and then the muscles pull it upwards and lodge it on the dorsum of the ilium. Sometimes when the head of the femur is dislocated, it will be nearly entire; in other cases it is partly absorbed. * * * There is one circumstance which favors the escape of the head of the femur from the socket of the acetabulum, and that is the position in which the child generally lies if left to himself, with his knees bent inward so as to cross the sound limb. This cannot be done without making the trochanter project on the side of the disease, and this favors the escape of the head of the bone."[*]

Boyer says :—"The terms spontaneous luxation of the femur, consecutive luxation, &c., have been applied to a disease of the hip-joint, in which the head of the femur, gradually pushed out of the acetabulum, ascends on the external side of the os innominatum or descends into the foramen ovale. * * * Often the disease is the consequence of scrofula, rheumatism, gout, &c."[†]

Referring again to the power of the muscles to force the bone from its socket, he says :—"Dans les articulations orbiculaires, environées par des muscles nombreux et puissans, l'action de ces organs se joint constamment à la violence extérieure pour causer la luxation."[‡] He elsewhere calls attention to the fact that the bone does not always preserve the position it first assumes as the result of a dislocation, but is moved therefrom by muscular contraction—calling the first primitive, the latter consecutive.

Mr. Holmes says :—"I have already stated that dislocation, in any intelligible sense of that term, hardly ever occurs as a consequence of hip disease, i. e. the surface of the head of the bone is hardly ever removed from contact with the acetabulum. The displacement to which the elevation of the trochanter is due is almost always the result of enlargement of the acetabulum and drawing upwards of the neck and trochanter. At the same time, I have referred to a case under my charge, in which true dislocation had certainly taken place; and I have seen a few other cases. In one, under Mr. Cæsar Hawkins's care, and where he removed the head of the femur, it lay immediately under the skin. In another in the Museum of St. George's Hospital it is placed just below the anterior or superior spine of the ilium. But, in all ordinary cases, the head of the femur (or its remains) however displaced, is in contact with the enlarged acetabulum. Mr. Barwell says that when dislocation has become complete, so that the ulcerated bones are no longer in contact, the muscular spasms will subside, and, with them, the obliquity of the pelvis will disappear; so that in every case, if the characteristic obliquity of the pelvis is present, with only the usual amount of shortening, the surgeon may be sure that there is no real dislocation.*

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[*] Brodie. Observations on the Diseases of the Joints, Boston, 1842, p. 137.

[†] Smith. Medical and Surgical Memoirs of N. Smith, p. 167.

[*] Brodie. Clinical Lectures on Surgery, Philadelphia, 1846, p. 279.

[†] Boyer. A Treatise on Surgical Diseases, New York, 1816, vol. ii. p. 294.

[‡] Boyer. Traité des Maladies Chirurgicales, iv. 21, Paris, 1822.

Singularly in opposition to the method of dislocation which is suggested by the authorities named, and seemingly contrary to reason, is that by the distention of the capsular ligament by synovial fluid or pus. Sir Benjamin Brodie says :—" I shall speak at present of dislocation from disease only as it occurs in cases of inflammation of the synovial membrane. I have seen several instances in which dislocation took place under these circumstances, and I conclude that the following is the proper explanation of it :—The cartilage begins to ulcerate, and generally at that part at which the ligaments are inserted. The ulceration extends to one extremity of the round ligament. The acetabulum is filled with lymph and synovia, and the capsular ligament is thereby much distended. There is then, of course, a force operating which tends to push the head of the bone out of the socket in which it is contained."†

The apparent folly of such an explanation is answered by quoting a passage from Boyer, as follows :—" This explanation appears, at first sight, to be plausible; but it is specious. If there were any increased quantity of synovia, it would collect between the neck of the femur and the capsular ligament and distend the latter ; but it can never stretch this ligament, nor the muscles around the joint and remove the bone from the cavity ; for, if the synovia were to become thick (abundant ?), it would rather retain the bone in the acetabulum, than displace it. "‡

M. Petit, after giving a case of dislocation of the femur, due to rheumatic arthritis, continues :—" l'os ne se déplace point dans l'instant de la chûte, mais long-temps après et par degrés. Dans les premiers jours la tête garde sa situation naturelle et la cuisse ne commence à se racourcir que quand la tête a commencé de'être chassée par la synovie. Il semble que la cuisse ne devroit se racourcir que lorsque la tête de l'os est entièrement sortie ; cependant elle ne devient plus courte que peu à peu et a mesure que la tête fait son chemin pour sortie."§ Again he says, repeating to a certain extent the same idea :—" In falls on the trochanter, the head of the femur is violently pushed against the acetabulum, and, as it exactly fills this cavity, the cartilages, synovial glands and the round ligament are bruised ; hence follow inflammation and suppuration. The synovia collects in the cavity of the joint, the capsular ligament becomes distended by it and the head of the bone is gradually pushed out of its socket. This fluid continuing to collect in the cavity and not being dissipated by the movements of the part, relaxes the ligaments, which are further distended by the action of the muscles. Not only the capsule, but the round ligament is gradually elongated, and the pain continues to augment until this ligament, entirely relaxed or broken, leaves the bone free to take that course in which the action of the muscle shall direct it."*

Howship, in his Practical Observations, perhaps best introduces a subject which has a bearing in the doubt which sometimes exists, whether or not complete luxation takes place, that is the rupture of the capsular ligament. " One question that naturally occurs is the following :—Is the capsular ligament of a joint necessarily ruptured in dislocation or not? Upon this point experience certainly proves that, in some instances, rupture of the capsularligament takes place, but not in the majority. It was the opinion of a very distinguished surgeon† that the laceration of the capsular ligament depends on the manner of the accident, but it may certainly be regarded as much more immediately dependent, at least in most instances, on the particular state of the ligaments themselves."‡ Sir Benjamin Brodie, after describing a case of dislocation from disease, says :—" The acetabulum was almost completely filled with pus and coagulated lymph ; the latter adhering to the carious bone, and having become highly vascular. The head of the femur was lodged on the dorsum of the ilium. The capsular ligament and synovial membrane were much dilated ; and, at their superior part, the attachment to the bone was thrust upward ; so that, although the head of the femur was no longer in the acetabulum, it was still in the cavity of the joint."§

Mr. Stanly, in an article on spontaneous dislocations of the hip, gives several cases almost identical in description with that of Mary D., and makes some very valuable observations on the subject in question. Short extracts from his articles are given, as showing his view of the case:—"It is well ascertained that inflammation of a mild character, whether rheumatic or otherwise, may, without evident change in the organization of ligamentous tissue, so far affect its power of resistance, that it will yield considerably to an extending force. * * * In the hip joint, from inflammation of a mild character, and probably commencing in its fibrous tissues, there may be effusions of fluid into the capsule, with the yielding of it and of the ligamentum teres; first, an increased length of the limb, and an increase of its circumference in the district of the joint; and, subsequently, on the head of the bone reaching the brim of the acetabulum, a shortening of the limb, as the capsule gradually yields to the action of the powerful muscles constantly tending to draw the limb upwards and backwards. * * With a lengthening of the capsule of the hip joint, it is unlikely that the head of the femur would be displaced in any other direction than upwards and backwards, with a corresponding shortening of the limb, the action of the more numerous and powerful muscles tending to this result; and it may be presumed that the precise situation of the head of the bone will then be between the glutæus minimus muscle and the dorsum of the ilium. * * * It will be remarked, that, in the majority of the cases which have been related, the displacement of the head of the femur occurred so gradually, and with such a freedom from uneasiness in the part, that the patient was wholly unaware that changes so important were in progress; in fact, there was no suspicion of them before the discovery that the actual dislocation had taken place."*

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* Holmes. The Surgical Treatment of the Diseases of Infancy and Childhood, London, 1868, p. 442.

† Brodie. Clinical Lectures, &c., p. 274.

‡ Op. citat.

§ Petit. Hist. de l'Acad. Roy. des Sciences, 1722, p. 117

* Boyer. Op. citat., p. 294.

† Desault.

‡ Howship. Practical Observations in Surgery and Morbid Anatomy, London, 1816, p. 461.

§ Brodie. The works of the late Sir Benjamin Collins Brodie, vol. ii. p. 247.

Dr. Hayward gives the case of a child, who, without injury, was found, on recovery from a long attack of typhoid fever, to have a dislocated femur in the same way.†

"Again, the disease is generally a subluxation; but it may sometimes be complete. In a case of hip disease, occurring in a boy about 10 years of age, which terminated fatally, I excised the head of the bone, which was completely dislocated upon the dorsum."‡

In view of the reduction of the femur in the case of Mary D., it again becomes interesting to quote the authorities on the subject. M. Velpeau advises that whenever a dislocation has become somewhat old—several months, for example—and would require attempts at reduction that might prove dangerous, the surgeon should abstain from intervention.* M. Chassaignac also comments upon the erroneous nature of the views of Pravaz, who supposed he could reduce congenital dislocations by forming, so to say, new articulations. * * * The production of a new articulation must be entirely due to the spontaneous efforts of the economy, by means of which plastic exudations are cast around the displaced bone and gradually transformed into another cavity for its reception."† Dr. John C. Warren, expressing his opinion in reference to a case before the court—of course before the days of anæsthetics—says: "In regard to hip dislocations, I must say there is the strongest reason to believe that the intervention of a few days between the accident and the operation will form insuperable obstacles to the reduction of such dislocations in the greater number of cases."‡

Holthouse, in Holmes's Surgery, says:—"Much must depend on the age and constitution of the patient, and something on his own wish in the matter. Fabricius Hildanus mentions the case of a lady of rank in whom reduction was attempted fifteen weeks after the accident, but without success; it has, however, been accomplished after the lapse of six months, twelve months, and even longer, as in the remarkable case of Mr. C., related by Sir A. Cooper. Under ordinary circumstances, a reduction of the hip is hardly to be looked for later than eight weeks after the accident, which was the limit placed by the distinguished surgeon just mentioned, beyond which it should not be attempted Fergusson has never witnessed a successful effort beyond the period of three weeks; but he would deem it quite correct to make trial of all reasonable means at a much longer date, though he could not be at all sanguine of success after two or three months."§

Brodhurst "pointed out two distinguishing features of old dislocations—namely, on the one hand, the recovery of motion and the formation of a new joint; and, on the other, a painful position of the head of the bone, together with a motionless condition of the limb; and suggested that interference was to be deprecated when motion was being restored and the new joint was becoming perfect, but that reduction might, at any time, be attempted whilst the limb remained motionless and painful."[*] In the same article he says:—"With chloroform, no precise time can be set as a limit to the reduction of an old dislocation. When useful motion is being regained, when the new joint is being formed, and pain has subsided, attempts at reduction may be deemed unjustifiable; but while the limb remains painful and motionless, the dislocation is reducible, and it ought to be reduced."

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* Stanly. Medico-Chirurgical Trans., vol. xxiv. (1841), p. 125 et seq.

† Hayward. Surgical Reports, &c., Boston, 1855, p. 72.

‡ Bigelow. Op. citat., p. 110.

* Med. Times and Gazette, Dec. 16, 1865.

† Ibidem.

‡ Warren. A Letter to Hon. Isaac Parker on Dislocations of the Hip-joint, Boston, 1826.

§ Holthouse. Holmes's System of Surgery, vol. ii. p. 643.

Dr. Bigelow, in his exhaustive monograph on the Hip—to which I am indebted not only for much information, but also for many valuable references—gives this opinion in reference to the circumstances under which successful reduction may fairly be looked for:—"So long as the socket was still excavated, and the bones were not deformed by osseous growths, I should feel quite confident of breaking any adhesions, lacerating the newly formed capsule, and replacing the bone, by the great power of the femoral shaft as a lever, and of the flexed leg in rotating the head of the bone around the main ligament."[†] As shown in the table which accompanies this article, he has himself reduced the femur several times after prolonged dislocation. The views thus expressed are substantially the same as those of most of the other surgeons.

Sir Astley Cooper gives the following testimony:—"I feel that my professional brethren will be disposed to think that I have limited to too short a time the attempts at reduction. It has been stated that dislocations have been reduced at four, and even six months after the injury; and this assertion I am not disposed to deny; indeed, I have myself had an opportunity of witnessing examples of the fact; but excepting in very emaciated, relaxed, and aged persons, I have observed that the injury done in the extension has been greater than the advantage derived from the reduction; and, therefore, in the case of a very strong, muscular person, I am not disposed after three months to recommend the attempt; finding that the use of the limb is not, when reduced, greater than that which it would have acquired in its dislocated state."[‡]

Mr. Fergusson says:—"It may often be a question, whether or not, in dislocations of old standing, the surgeon should persist, or even attempt, the application of violent force to effect reduction. I have seen a most excellent practitioner fail at the shoulder, after the lapse of three weeks, when another, making the attempt a few days afterwards, succeeded. I have myself failed in the fourth week, while I have been successful on several occasions in the eleventh; and, though cases have been put to rights even after the third month, the propriety of interfering with the generality of such instances may admit of doubt."[*] Again, speaking of the hip, he says:—"I have myself seen attempts made in various instances of old standing, but have not witnessed a successful effort beyond the period of three weeks. Sir Astley Cooper has described instances of a more fortunate kind, after the lapse of four, five, six and seven months, and I should certainly deem it quite correct to make trial of all reasonable means at a much longer date than this, although, after two or three months, I should not be at all sanguine of a favorable result."[†]

Holmes Coote, referring to dislocation on the dorsum, says:—"This condition is quite irremediable. The head of the bone may be drawn down to the socket, but it cannot be kept there. The patient gradually acquires the power of locomotion, but the spine assumes the curvature known by the name of Lordosis."[‡] It, of course, suggests itself to the mind that the author has here in view only those cases where erosion of the head, as well as dislocation, exists.

With this review of various authors on spontaneous dislocation, and reduction after long luxation, we recur to the case first stated for some practical observations. A child, eight years of age, is detained in bed by an illness which careful investigation decides to be, without doubt, rheumatism, and rheumatic arthritis of the coxo-femoral articulation. She lies on her side, with the legs flexed for 3½ months, and, on being removed from bed, is found with all the symptoms of dorsal dislocation, well and thoroughly marked, which do not disappear under ether, as would a lateral curvature of the spine, with a tilted pelvis, a subluxation, or an entire loss of the head of the femur; but, on the application of the manipulation method, the limb is at once restored to its proper shape, and, after a reasonable time, the patient comes out sound and whole.

It may be asserted that the case was not one of rheumatic arthritis, but may have been the result, immediate or consecutively, of the slight fall which she experienced.

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[*] London Lancet, 1862, i. 665.

[†] Op. citat., p. 107.

[‡] Cooper. A Treatise on Fractures of the Joints, Boston, 1844, p. vi.

[*] Fergusson. A System of Practical Surgery, Philadelphia, 1853, p. 200.

[†] Ibidem, p. 294.

[‡] Holmes Coote. On Joint Diseases, London, 1867, p. 127.

The character of the symptoms, however, which were carefully inquired into, goes to show that this was merely an episode, and no more chargeable with the disease of the joint, than the fall which breaks down the remaining portions of the vertebræ in Pott's disease.

But may not an error of diagnosis have occurred in calling this a true dislocation? An early consideration should be, what constitutes lengthening, what shortening, and what dislocation. Without entering into details, we know that apparent lengthening and shortening, in nine out of ten cases of trouble at the hip, are due to no dislocation, no injury in fact of the bones themselves—but solely to tilting of the pelvis, lengthening the limb in the earlier and shortening it in the latter stages of the disease—not due to the same actual causes, but simply observed as an anatomical fact. We are well aware how frequently it happens in advanced hip disease that the head of the bone becomes carious, eroded and, at last, lost; the remaining portion of bone becomes drawn up by the muscular action, and the upper portion of the bone rests on the edge of the acetabulum or perhaps the dorsum. No proper nomenclature could include this as a dislocation; but, of course, it is the cause of shortening. Again, we often find the head of the bone sound, but disease existing in the acetabulum; or, cases in which by accident the head of the bone is long pressed against the upper edge of the cavity, in both of which cases the acetabulum yields to the pressure, and becomes deeply excavated, the head of the femur finds a lodgment there and forms itself a socket, thus causing the sub-luxation of most authors and of course inducing shortening; a luxation, too, which can generally be reduced without ether and without manipulation, but which does not give the signs of dislocation as in complete luxation.

The case in question I consider a true luxation, however, judging from the shortening, flexion, inversion, and other marked signs of dislocation; from the persistence of the symptoms under ether, and the immediate restoration of the limb to its proper form by the operation.*

I think the evidence which this and other recorded cases offer shows that, under such circumstances, spontaneous dislocation *may* occur, that where flexion of the limb has long been customary on account of the acuteness of the disease, the head of the bone, by pressure on the edge of the acetabulum, may cause absorption; if we arrest the process then, we have sub-luxation; but if we allow it to go on, the head of the femur passes over the edge of the acetabulum, passing through the capsular ligament or pushing it before it, and the result is complete dislocation.

Finally, the bone thus abnormally placed may form for itself a new socket, and so become, though to a limited extent, useful for the purposes of locomotion; or, by judiciously regulated manipulation, may, even after the lapse of a considerable time, be restored to its place, and the integrity of the limb regained.

A table of the cases of reduction of old dislocations of the femur which I find on record, is given for reference.

SURGEON.	TIME.	AUTHORITY.
Gockelius.	180 days.	Gallicinium Med.-practicum, p. 288.
Salicet.	365 "	Ibidem.
Dupuytren.	31 "	Op. chap. 19.
"	78 "	Ibidem.
"	99 "	"
Dupierris.	180 "	Hamilton, Frac. & Dis., p. 679.
Breschet.	72 "	Repertoire Génerale.
Cooper.	26 "	Dislocations & Fractures, p. 35.
"	5 years.	Ibidem, p. 81.
Liston.	35 days.	Ibidem, p. 45.
	2 years.	Mem. de l'Acad. Roy. de Chir. de Paris, tom. v. p. 529.
Malgaigne.	365 days.	Op., tom. ii. p. 281.
Hayward.		Op., p. 71.
Crosby.	68 "	Trans. Am. Med. Ass., vol. iii. p. 356.
Atlee.	120 "	Ibidem, p. 357.
Williams.	150 "	Lancet, 1862, vol. i. p. 665.
Bigelow.	90 "	Dis. & Fract. of Hip, p. 211.
"	240 "	Ibidem, p. 55.
"	28 "	" p. 54.
Blackman.	180 "	Ohio Med. & Surg. Jour., vol. viii. p. 522.
Smyth.	270 "	New Orleans Jour. Med., January 1, 1869.
Brown.	105 "	
Kimball.	90 "	North Western Med. & Surg. Journal, June, 1870.

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* This patient was examined by several gentlemen, who happened to be present at my visits, and they concurred with me in my estimate of the malposition of the bone.

ON THE USE OF PEPSIN.

By E. P. Hurd, M.D., Newburyport, Mass.

How much confidence ought we to place in Pepsin as a therapeutic agent? Are we giving our dyspeptic patients anything that will do them any real good when we prescribe for them twenty grain doses of "Nutrimentative Powder?" Are we administering real gastric juice, or only an inert imitation, made from the scrapings of stomachs that are not human? There would seem to be some sense in giving a liberal quantity of *rennet* (and this any butcher will supply at moderate price); is there any sense in giving a scruple of a powder the bulk of which is *starch*, and which, if ever so thoroughly impregnated with the steepings of the pig's stomach, can digest only eighty or ninety grains of aliment? According to the formula for Boudault's Pepsin, one part will digest only about four of albumen; 15 grs. (the usual dose) will digest—with heat and muriatic acid—a drachm and a half of white of egg. How far is that quantity going to help the poor victim of indigestion through with the chemical solution of an ordinary meal? It would seem as though a much larger dose should be administered for the drug to be of any utility. For four ounces of beef steak, we should clearly require about an ounce of Pepsin, and our patient would need the wealth of Crœsus to keep himself in medicine, for Pepsin is expensive.

The subject needs looking into. I question whether, in support of Pepsin as an artificial solvent of food, we have sufficient data on which to depend. My own experience has led me to be sceptical as to its utility. All the kinds of Pepsin in the market are sold at such high prices as not to be available to our poorer patients. I have been in the habit of recommending sheep's or pig's rennet instead, and with satisfactory results. We clearly need something that will supply the place of gastric juice in deficiency of that secretion. Pepsin very poorly meets this want, and I have reason to believe that much of the Pepsin which is sold in the market is purely inert. The "Elixir Strychnia, Pepsin and Bismuth," which is sold in our drug stores, owes its medicinal virtues principally to the strychnia which it contains. There is not enough Pepsin in it to do any good.

THE INFLUENCE OF MENSTRUATION ON NUTRITION.

By Dr. Rabuteau.

When man is subjected to a uniform regimen, he eliminates daily the same amount of urea, and the daily average of his pulse and temperature can be considered as constant. It is thus possible to make a long continued series of experiments when it is desired to study the influence of various agents on nutrition. But with the adult female the case is different. My attention was recently directed to this point in studying the action of alkalies on the system of a woman who was following a carefully regulated regimen. I found discrepancies which I could not at first explain, but whose correlation with menstruation I have since recognized. The results at which I have arrived confirm the following conclusions:

I. During menstruation, the urea is diminished more than twenty per cent., the pulse becomes slower, and the temperature is lowered at least half a degree.

II. These changes commence to manifest themselves one or two days before the appearance of the catamenia, and disappear a few days after their cessation.

The woman who was the subject of my observations was twenty-eight years old, was in good health, and menstruated regularly. During my experiments, a uniform diet was followed, and the temperature was taken in the vagina.

The results arrived at possess an interest in a clinical point of view. Whenever a woman is attacked by a disease which does not suppress the catamenia during its progress, it will be necessary to take into account the disturbances of the pulse and of the temperature which pertain to menstruation. Correlative changes in the urea eliminated, in the pulse and in the temperature necessarily imply an analogous variation in the exhalation of carbonic acid. We know very well that when urea is diminished, carbonic acid is equally diminished. It cannot be otherwise in this case, where all the processes of organic combustion are interfered with because of the loss of a certain number of blood globules, which are the vehicles of oxygen.

I hope, in view of these facts, to refute a great error of MM. Andral and Gavarut. (Annal. de Chim. et de Phys., 1843, 3d ser. vol. viii. p. 129.) They, after having determined that the combustion of carbon increases in man during a period from childhood up to a certain age, then diminishes, and, finally, in old age, falls very low, have advanced the theory that with the non-impregnated woman this progression, at first ascending, then descending, does not occur in the same way; but from puberty to the menopause the woman would not eliminate more carbonic acid than the young girl of from twelve to fifteen years, while at the period of the menopause the combustion of carbon would suddenly increase and subsequently diminish as age advanced.

The first part of this proposition is an error; during the thirty years of menstruation, there are about twenty in which the condition alluded to is the same in the male and the female. In the interval comprised between the five or six days following the cessation of the menses, and a day or two before their re-appearance, an adult woman eliminates not only more urea, but more carbonic acid than the young girl; just as an adult man exhales more carbonic acid than a child. The authors quoted took, as a general rule, an exceptional condition, which is immediately dependent on the catamenia, and which, in consequence, is only temporary.—*Gazette Hebdomadaire,* July 5, 1870.

Selected Papers.

ON THE USE OF ARSENIC IN CERTAIN PAINFUL AFFECTIONS OF THE STOMACH AND BOWELS.

By Arthur Leared, M.D., M.R.I.A., Senior Physician to the Great Northern Hospital.

As the scope of these remarks is to be exclusively practical, I do not stop to consider the nerve distribution of the gastro-intestinal tube in relation to pain. This has been carefully done by Dr. Eulenburg, in his papers on visceral neuralgia, now being published in this journal.

Pain after food is a very common symptom of dyspepsia, and in many cases seems to constitute the disease. This pain usually yields to medical treatment and proper diet. But there is another kind of gastric pain far more severe than that which depends on food, and which does not yield to ordinary remedies. I have elsewhere pointed out how this pain may be removed, and the subject seems of sufficient importance for some further remarks.

In case of the stomach, the pain we have to deal with happens to the same individual at one time when it is full, at another time when it is empty. But cases are met with in which the presence of food in the stomach is clearly the exciting cause. The typical case is that in which there is pain independent of the act of digestion. In this form it commonly seizes the patient in the middle of the night, and is not preceded or attended by any dyspeptic symptoms. The pain in these instances, which are fortunately not very common, is extremely severe, and attended with alarming prostration, lowering of the heart's action, pallor, and cold perspiration. Brandy and other stimulants give but little relief, and after a period of agony sometimes extending to several hours, the attack ceases as suddenly as it had commenced.

Persons of middle age who have been exposed to some great cause of mental depression are peculiarly the subjects of this affection of the empty stomach. Dr. Budd has also noticed mental disturbance as an exciting cause of the disorder, and he adds that "it is closely allied to water-brash." In this statement I do not concur, for without entering into the vexed question of the nature of water-brash, it is sufficient to say that a particular remedy which cures the one proves injurious to the other.

Further experience has taught me that the bowels, and especially the small intestines, are subject to the same kind of pain. I do not include colic from the effects of lead; but many cases of so-called colic unaccountably occurring at longer or shorter intervals are from the same cause. For whether the pain attacks the stomach or the intestines, its nature is the same; it is essentially neuralgic. Upon this circumstance the success of the new treatment, which consists in the judicious exhibition of arsenic, depends. As may be inferred from what has been stated, the difficulty of diagnosis between the neuralgic and the more common forms of gastro-intestinal pain is very great. The best rule of practice is, when gastric or intestinal pain resists all ordinary treatment, and cannot be traced to gall-stones or any organic source, to test the matter by the effect or non-effect upon it of the remedy. By this method I have succeeded in effecting several cures. On the other hand, the arsenical treatment has failed in two cases in which, so far as the diagnosis could be established, it ought to have succeeded. In both instances the patients were women past middle age, of stout habit, and too freely addicted to the use of alcoholic stimulants.

The curative effects of arsenic are most striking in severe cases of paroxysmal pain, and its success becomes doubtful in proportion as the case assimilates to those in which a lower degree of pain is traceable to the influence of food. In determining the question of the fitness of a case for the arsenical treatment certain circumstances may render essential aid. If the disease came on after some mental shock or severe trial, if the patient has previously unmistakably suffered from neuralgia, if he has lived in a marshy district, and especially if he has had hemicrania or ague, and if in addition to the occurrence of one or more of these circumstances the pain is paroxysmal, it will almost certainly yield to arsenic. But as already said there are other cases suitable for the treatment, and they are the most numerous, in which the pain closely resembles that which attends dyspepsia. It is sometimes extremely difficult to make the diagnosis between neuralgic pain of the stomach or bowels and the pain caused by gall-stones. But in my previous paper I have gone into details respecting this and other sources of error.

A few words will suffice as to the particular preparation of arsenic to be selected, and the extent to which it should be used. In most cases the liquor arsenicalis answers every purpose, but when the system is more than usually susceptible of the action of the mineral the liquor sodæ arseniatis seems to irritate less, and in a few instances the acid solution of arsenic is to be preferred to either. Whatever preparation be selected it should always be taken immediately after food, and, notwithstanding that its beneficial action may have been previously observed, it will be proper to continue the medicine until its constitutional effects are well marked. Notwithstanding what has been said to the contrary I do not believe that the proper use of arsenic as a medicine is followed by any injury to the system.

The following brief notes illustrate the utility of the treatment in cases in which the pain is increased by food, and also its effect in cases in which the intestines are affected:—A lady, 40 years of age, who had met a reverse of fortune by the death of her husband two years previously, was sent to me by her medical attendant in January, 1869. I was informed by him that every ordinary means, including a milk and farinaceous diet, with entire abstinence from meat for eight months, had been exhausted in his attempts to relieve her sufferings. These consisted in constant pain in the gastric region, extending round the left side to the centre of the back. The pain was much aggravated by meals, especially by breakfast and tea, and at times it amounted to perfect agony. Vomiting frequently ensued, and then some relief of the pain was obtained. There was great flatulence, a sense of oppression in the stomach, and obstinate constipation. The patient, naturally of stout habit, had lost over 50 lbs. in weight. She was immediately put on the arsenical treatment, which was speedily followed by great improvement. This treatment was continued, and the dose gradually increased until the constitutional symptoms, which consisted in this instance of itching of the eyes, soreness of the soles of feet with a red rash upon their sides, ensued. By this time her cure may be said to have been complete; she rapidly gained flesh and strength, and has since remained well.

The symptoms, in this case, resembled those of ulcer of the stomach, but the fact that a rigid milk and farinaceous diet increased rather than diminished them was opposed to this view.

A gentleman, 28 years of age, much engaged in commercial speculations, consulted me in the early part of the present year. He had been for a long period subject to a violent but dull pain in the umbilical region, coming on about two hours after meals. For the three previous weeks it had happened daily after breakfast, luncheon, and dinner. Liquids, even plain water, induced it more than solids. There was neither flatulence nor any other stomach disturbance, and the bowels were quite regular. Various plans of treatment had been found ineffectual. He had suffered from neuralgia in the left temple two years previously. Notable relief was afforded by the liquor arsenicalis after it had been taken only two days; it was continued altogether for about three weeks, when his eyes became affected. At this time the disease had quite subsided.—*London Medical Times and Gazette.*

Medical and Surgical Journal.

BOSTON: THURSDAY, SEPTEMBER 29, 1870.

ETHER BETTER THAN CHLOROFORM; STATISTICS OF FIFTY CASES OF OVARIOTOMY.

FROM a valuable paper in a recent number of the London *Lancet*, by Dr. Thos. Keith, of Edinburgh, in which he gives in detail the result of a second series of fifty cases of ovariotomy, with an account of those cases in which no operation was performed, we glean a few practical points of more than usual interest.

Of the 100 cases reported there had been 81 recoveries, and in the second series of cases a gain of six per cent. had been made over the first 50. In the first series death took place, on an average, in the course of the third day; in the latter, during the tenth day.

"In case 52 the excessive chloroform vomiting during the operation, and for some time after it, so prostrated the patient that her chance of recovery was lost. In the early cases I have frequently had to deplore the injurious effects of chloroform vomiting in ovariotomy, and so evident was the mischief occasioned by it in this unfortunate case, that *I have since then entirely abandoned the use of this agent in ovariotomy and other severe and tedious opera-*

tions, and now use instead anhydrous sulphuric ether [the italics are ours, Ed. Journal] made from methylated alcohol, administered through Dr. Richardson's apparatus. *The oftener it has been given the more I like it. How chloroform so quickly superseded it is a marvel.* The anæsthesia of ether, though at first slower, is extremely steady and quiet. There is infinitely less vomiting than with chloroform, and instead of the pallid face and feeble pulse of chloroform, the patient, after a long operation, is put to bed with a flushed face and a great surface circulation. In cases of non-adherent tumor vomiting is, I fancy, of little consequence; but when there has been extensive adhesion, and when oozing may be set up by it after the wound is closed, vomiting can be no trifle, and will turn the scale. Sulphuric ether has now been used—at first with a small proportion of chloroform—in 53 cases of ovariotomy (of which 46 recovered), and I think that something has been gained from the use of it. I would put in a word for the old anæsthetic. Chloroform certainly saves the surgeon five or ten minutes of time, and a little trouble. *Had it never been heard of, I doubt if humanity would have suffered from the want of it.*"

"When practicable, the extra peritoneal method of treating the pedicle has been adhered to. On the whole, greater success will probably follow this than any other single method, especially when we have to do with a bad general condition. Thus in 40 clamp cases (from the 45th to the 85th) there were 3 deaths; and in neither of them had this way of treating the pedicle anything to do with the result. Ligatures on the pedicle have also once or twice been cut short, and returned; sometimes they have been left hanging out at the wound, and of late the cautery has been several times used with excellent results. Each method has advantages in certain cases.

* * * * "The mortality would probably have been much lower, if there had been earlier operation in many of them; not that small tumors giving little trouble should be removed, for, on the whole, cases do best where the tumors are large and the general health somewhat impaired. There is, however, a stage in the progress of ovarian disease in which the operation is safe; and, if this favorable time be allowed to pass, no care or skill can make up for it."

We are glad that so distinguished a man as Dr. Keith has reached such a point that he can conscientiously recommend the use of ether over chloroform in the operations of surgery, and especially in ovariotomy; and that this course, moreover, is not the result of a fancy or whim, but that he has, in the very stronghold of chloroform, by the result of experience and actual trial, arrived at this result; he has worked out, *exergized* by sheer force, a sequence which he could not escape, and has frankly given his brethren testimony to that effect. The testimony given by Dr. K. is rendered much more valuable when we consider the respect which he commands in the professional world. A pupil of Sir James Simpson, eminent as an investigator, a careful worker, and a writer of ability, he has especially made himself famous in the study and care of ovariotomy.

We are disposed to take issue with Dr. Keith on one point, namely, the time alleged to be lost in the administration of ether. The average time spent in thoroughly etherizing patients in our experience has been from three to five minutes; we *have* placed a patient entirely under its influence in a minute and a half by the watch; but we have never felt justified in using chloroform so rapidly. The fact undoubtedly is that our English brethren are in the habit of using ether with the same cautious admixture of air that we employ with chloroform. We have seen ether so given by physicians, of large experience even, and we have not wondered, on seeing it, at the popular belief that some patients "cannot take ether," or at the time alleged to be wasted by our English brethren.

Messrs. Editors,—In reading the article in your last number, September 15th, 1870, entitled, "Modern Medicine; its Need and its Tendency—The Annual Discourse before the Massachusetts Medical Society May 25th, 1870—by William W. Wellington, M.D., of Cambridgeport," this evening, I was startled by the remarks, "Diseases which can be cut short or broken up by medicine are few in number, and may be counted on the fingers," and the author of the paper, H-P., adds, in brackets, "He might have said thumbs, and, possibly, then had one to spare;" also with the remarks preceding, "Disease is a series of perverted life processes; not a thing added to the animal economy to be driven out, nor a thing subtracted from it, leaving a void to be filled." "The object in any serious illness being usually not so much to drive disease out of the body as to keep life in it. Whatever else be done, or be not done, let his strength be supported by proper nourishment, supplemented, if need be, by tonics and stimulants, so that he may be kept alive till the disease has run its course and the natural forces have restored healthy in place of diseased processes."

My graduating Thesis, Messrs. Editors, was on the "Vis Medicatrix Naturæ," and during over forty years of active and extensive practice in city and in country, in epidemic and contagious, as well as in all kinds of sporadic disease, I have been a careful and close observer, not only of disease itself, but of the efforts of nature to throw off disease and to remedy its effects; and I do most solemnly protest against the doctrine that disease is a "perverted life process." I maintain that disease causes this "perverted life process," and that it is simply an effort of the vital powers to throw off disease.

I also wish to enter equally as strong a protest against the assertion that "diseases which can be cut short or broken up by medicine are few in number, and can be counted on the fingers," much less on "one thumb." Every respectable practitioner of medicine knows that pleurisy and all acute inflammations of the fibrous and synovial membranes are not only cut short, but eradicated by proper depletions and other antiphlogistic treatment. Would the author of that annual discourse, who received such an unanimous vote of thanks from the Massachusetts Medical Society, dare to give brandy and quinine and other tonic and stimulating medicines and diet in gastritis, enteritis, hepatitis, nephritis, or other acute inflammatory disease of any of the vital organs or membranes of the brain, or even the mucous membranes, and wait until suppuration or gangrene followed as the result of the inflammation, and the patient died, for nature to cure the disease, and excuse himself by saying that the probably correct conclusion our profession have come to at the present day is that "disease is a part of the plan of creation," in other words that is is ordained by God our Creator for our benefit, and the duty of the physician is to support the patient by nourishing food and tonics, and stimulants, so he may best endure the changes he is undergoing by this foreordained "*part of the plan of creation*," until "the natural forces have restored healthy in place of diseased processes," or the disease has killed the patient, which it will do in ten out of every twelve cases of acute disease under such treatment.

I am now practising in the midst of the densest population of this great city of New York, where tenement houses, with from ten to twenty families in each, do most abound, and where fevers, dysenteries, cholera morbus and cholera infantum do most prevail; and not being a Homœopathist, or Brunonian, as we used to call those who gave brandy and tonics at the commencement of disease, I deplete by venesection in acute cases where the patient is strong and robust, give an emetic—ant. tart. I prefer—followed by mercurial cathartics, until the offending contents of the bowels are removed, and the liver and digestive organs are restored to a healthy action, allaying irritation of the bowels by anodynes, and I but seldom have any of the diseases above named run over a week or ten days, and a large majority are cured in three or four days. I but seldom give tonics in these diseases, except a solution of quinine in intermittent fevers, after the emetic and mercurial cathartic. Of the numerous cases of these diseases I have treated during the past hot summer, not one in fifty have proved fatal where I was called at the commencement of the disease. How can any respectable physician say that these diseases were "not cut short or broken up by medicine"?

These doctrines, Messrs. Editors, enunciated in the annual discourse before your State Medical Society, are the same in substance as used by the late Governor Briggs, of your State, in favor of homœopathy, in a long conversation I had with him on that subject, in 1852, and are the reasons assigned by Judge Harris, of Albany, now a Professor of the Albany Medical College, for being a homœopathist. If they are sanctioned and adopted by so respectable and conservative a body as the Massachusetts Medical Society, how long will it be before our noble Profession, who have done so much for the arrest, the amelioration and eradication of disease—the direst foe of man—will become homœopaths, and let this fell tyrant have unlimited sway, and scathe and cut down the human family unchecked and unobstructed, giving nourishing food and tonics to feed the disease as well as the patient, and millionths of a grain of medicine, occasionally, done up in sugar to satisfy the anxious friends that the utmost skill of our profession is exerted for the benefit of the sick and to cure the disease, until the "vis medicatrix naturæ" unaided fails in its efforts to expel the disease, and death closes the scene.

I am a firm believer in the efforts of the vital powers to throw off disease, and always try to aid them in their efforts. Hence, if I see a splinter in the flesh, and they are sending increased quantities of blood around it to produce inflammation and suppuration to expel it, I extract it. If I find vomiting in cholera of any kind, even *Asiatic*, I know it is the effort of these powers to expel some offending substance from the stomach, and I give an emetic to assist them in their efforts. If I find a diarrhœa, or even dysentery, I give a cathartic for the same purpose. If I find pain and fever, I know it is caused by some offending substance in the system, and if it cannot be directly removed by evacuants, I deplete and lessen the increased action of the arterial system until the absorbents and emunctories remove the offending cause. By this course of treatment I believe I have cut short and removed most of the diseases to which flesh is heir in many cases—the doctrine of the modern school of practice, if it is proper to call it by that name, as enunciated in the annual discourse above referred to, to the contrary notwithstanding. A. J. CHADSEY, M.D.

New York City, Sept. 17, 1870.

TREATMENT OF STRICTURE OF THE URETHRA BY THE INTRODUCTION OF HORSE-HAIRS AND PERFORATED BOUGIES. By Prof. MITSCHERLICH, of Berlin. Translated by FRANK W. DRAPER, M.D., Boston.—Prof. Mitscherlich, of Berlin, successfully treats the majority of cases of stricture by dilatation with whale-bone sounds or elastic bougies; four to eight weeks being required to restore the calibre of the canal. He has had opportunity to observe a number of persons in whom a cure was effected eight years ago, in whom there has been no recurrence of the stricture.

But there are some cases in which the stricture is apparently undilatable by the ordinary means, even by the use of the finest sounds. In such instances, Dr. Mitscherlich uses horse-hairs as delicate bougies. He has not yet found any cases which do not yield to this simple method, and he has always reached the bladder and successfully dilated. The horse-hair serves as a guide on which to pass small perforated sounds. The hairs are smaller than the smallest bougies, and possess, moreover, an elasticity and a compactness which permit their introduction without fear of injury to the urethra. In this respect they are preferable to whale-bone.

The instruments used by Mitscherlich consist, in the first place, of horse-hairs of the desired length. It is easy, according to circumstances, to secure greater size and stiffness by uniting two, three, or even more of the hairs together by means of some sort of elastic cement.

Secondly, he employs elastic sounds which are hollow. These sounds should be not more than half a line in diameter at the end, and their inner surface should be perfectly smooth and symmetrical.

These instruments, used with caution, cannot make false passages or do any other injury. The hair, being soft and flexible, will double on itself before perforating the canal of the urethra; and the bougies, being guided on the hairs, cannot deviate; indeed, they cause only trifling irritation.

The author reports a case in which the patient had cystitis, resulting from an old stricture, accompanied with extreme irritability of the urinary tract, and still another complication; and yet, after a time, he succeeded in introducing large sounds. In another case, the bougies were left in place several days without causing any bad symptoms.

In nine cases which Dr. M. has treated by this method, he has failed in only one. The surgeon being unavoidably absent, the patient became disheartened and entered a hospital; the stricture was there deemed undilatable, and perineal section was performed successfully.

In support of this method, two farther cases are reported of complete success in patients of thirty-five and forty years; and, moreover, one case of traumatic stricture. As this last variety is generally intractable, we report this case as one of interest in more senses than one.

A soldier, G. H., received a gun-shot wound in 1849. After some years an attempt was made to extract the ball, which was felt through the soft parts of the perinæum. The patient was placed in the lithotomy position and anæsthetized. When the operator, having reached the ball, was about to seize it with forceps, it escaped his grasp, and probably became lodged in the cavity of Douglas. Further search for it was suspended, and it was not felt afterwards. After the operation, the patient passed his urine both by the urethra and by the perineal wound. The consequence was the development, in less than a year, of a very firm and contracted stricture.

In the spring of 1868, an unsuccessful attempt was made to dilate the stricture, but Mitscherlich succeeded in passing a very small whalebone bougie into the bladder. The patient was very irritable, the more so because of a constant cystitis; in time, however, elastic bougies and very fine sounds were introduced. But the patient moved away and treatment was remitted; so that the stricture became so tight that a horse-hair could be passed through it only with the greatest difficulty. By means of these as guides, increasing sizes of hollow sounds were introduced. The time required for a cure was long, on account of the tightness of the stricture and because the occupation of the patient rendered the treatment less continuous and effectual.

The final result was as satisfactory as could be desired, large sounds being passed with ease. The cystitis was meanwhile only slightly relieved, but it should be remembered that a stricture of such long standing causes changes in the mucous lining of the bladder which will yield only after long treatment.

The method of Mitscherlich will attract, by its simplicity alone, the attention of those who, recognizing that theoretically there are no undilatable strictures, yet know that in practice there are cases which yield with the greatest difficulty. When, also, it is desired to perform internal urethrotomy, the use of horse-hairs offers an advantage of importance, since it can prepare the way for the guide, whether for urethrotomy or for forcible dilatation, thus obviating perineal section.

GASTRIC JUICE AS A LOTION. Translated by FRANK W. DRAPER, M.D., Boston.—The *Gazette Hebdomadaire* for July 15th, 1870, contains some observations on the use of gastric juice as an application to the ulcerations of malignant tumors, and as an antiseptic remedy of general utility in surgery. The following is an abstract of the article:

"The use of gastric juice in surgery was first suggested simultaneously in France and Italy in 1785. It was applied as a lotion to ill-conditioned ulcers, and under its influence remarkable changes were observed. The tough, calloused edges of the ulcer melted down, the purulent and sanious discharge gave place to an inodorous suppuration of good character, and the healthy and the diseased tissues became readily distinguished without the supervention of inflammation. It had a marked and beneficial influence when used internally as well, and contusions, œdema, indigestion and intermittent fever yielded to it. Subsequent researches confirmed these early observations, and an attempt was made to prepare artificial gastric juice by the maceration of small pieces of raw veal in salt water.

"But since the beginning of the present century the use of this agent has been almost neglected. It has been recently revived in Germany, and Dr. Menzel publishes two cases illustrating its effects. In one of these, the patient, a woman aged twenty-nine, presented herself with a malignant tumor, of large size and rapid growth, situated in the posterior and lateral cervical region. It was removed, and the wound cicatrized well, but in a month, adjacent glands became involved, and another tumor developed with such surprising rapidity that in two weeks it had grown to the size of a man's head. At its summit were two unhealthy ulcerations. To these two ulcers charpie, saturated with gastric juice, was applied, and over all was placed another layer of charpie filled with a weak solution of hydrochloric acid. After six days the ulcers had doubled in size, but all fœtor had disappeared, and, subsequently, although they enlarged rapidly, they continued healthy in their appearance.

"In the second case, a medullary cancer was removed from the parotid region of a man sixty-five years old. The incisions healed well, and recovery seemed assured; but after four months the malignant growth reappeared in the granulations of the wound. To this ulceration gastric juice was applied on a pledget of lint, and the muriatic acid dressing was also used—one part of the acid to one hundred of water. The surface of the ulcer became covered with a yellowish-grey false membrane, which was easily detached. The application was continued four days, with the effect of healing the wound almost completely. The patient died two months later, of an intercurrent disease.

"According to Dr. Menzel, the results of these two cases point to two conclusions. The gastric juice of the dog applied to ulcerated neoplasms (glandular or cancerous), produces a false membrane of a yellowish-grey color, and the ulcer loses all bad odor. It seems that the gastric juice does not attack living tissues which are well supplied with vessels, but that the destructive effects are confined to tissues which are already dead or are about to die. Dr. Menzel considers it superior as an antiseptic to most of the remedies in modern use, since it does not substitute for a putrid odor one scarcely less disgusting. It is not a caustic agent, nor does it fulfil the indications for the use of caustics; it will not destroy malignant growths, but it is a powerful antiseptic remedy which can modify the course of ulcerations. Unfortunately, of all such agents, it is the most difficult to prepare, and it is to be hoped that an artificial gastric juice may yet be made which will produce equally good results."

CASE OF TRANSVERSE FRACTURE OF THE PATELLA, WITH OSSEOUS UNION. By JOHN WOODMAN, F.R.C.S.—On the evening of August 21, 1869, W. E., aged 32, a smith and fireman, and a muscular man, was running quickly in the street on an alarm of fire, when he tripped, and, to save himself from falling, threw himself backwards, and in doing so felt something snap in his knee, and fell down. He was brought to my house, and attended to in my temporary absence by my neighbor, Mr. S. Perkins.

On the following morning I saw him, and found on examination that the left patella was transversely fractured, and that the two portions were entirely separated, being drawn widely apart on the slightest attempt to bend the knee. I brought the two portions together with strips of sticking-plaster and a figure of eight bandage, and placed the leg on an inclined plane, with the heel a foot higher than the hip, but finding it impossible to keep them in perfect apposition in this way, on the 23d I moulded a gutta-percha splint to the front of the knee, cut a hole in it exactly the size of the patella, and then applied this, padded with a little cotton-wool, and another gutta-percha splint for the back of the leg, keeping them moderately tight with a bandage, so as to press the patella through the hole in the splint, and thus hold the two portions firmly together. This answered the purpose admirably, and gave him no inconvenience at all. He was kept like this, with his leg on the incline, for about six weeks, and when he moved about he wore a light wooden splint with the front gutta-percha one, with a portion cut off to make it lighter. He was very anxious not to strain the knee, and kept the back splint on for nearly five months, whilst working at his trade.

I saw him on July 16, 1870, just eleven months after the accident, and found the bone perfectly united with osseous union, so much so as to render it almost impossible to detect the seat of the fracture; the edges of the bone are quite natural and smooth, and only a slight irregularity in the middle of the surface of the front of the patella can be detected on a minute examination. He can use the leg very well; although he cannot bend it quite as much as the other, still it is fast improving. His own remark was, "It is stronger than the other knee, and I have tried it very much in my trade" (a blacksmith).

The success of this case I attribute entirely to my being able to keep the two portions of the bone in such perfect apposition. As the plan is so simple I dare say it may have been tried before, still, as I cannot find it mentioned in any of the text books on surgery, there may be some of my professional brethren to whom the case may be of interest, especially as I see Erichsen says that only two or three cases of osseous union are on record.—*London Med. Times and Gazette.*

ARTIFICIAL FECUNDATION.—Dr. Girault, of Paris (*Medical and Surgical Reporter*), lately read an essay before the Medical Society of the Pantheon, entitled "A Study on Artificial Generation in the Human Race," and reported in all twenty-seven attempts at artificial procreation in the human female, of which ten were successful, and others doubtless would have been, if the couples had been more persevering in their efforts, and allowed him to continue his endeavors.

The only instrument necessary is a uterine catheter with a funnel-shaped opening at the external end. Into this the sperm is placed, after the point has been introduced into the cervical canal, and blown into the cavity of the uterus. The instrument should be of the temperature of the body, and the semen contain active spermatozoa, with long and rapidly vibrating tails, as the latter is the sign of their fecundating power.

Among others, he relates the following case:—A man, 65 years old, married to a wife of 27 years, had passed seven years without offspring. The pair applied to Dr. Girault, who, after four failures, succeeded so completely on the fifth attempt, that in nine months afterwards the lady was delivered of twins, one boy and one girl. The latter died after three months, but the former survived and was healthy when last seen, at the age of 9 years.—*Med. Record.*

MANGANESE IN BLOOD AND MILK.—Professor Polucci, of Italy, has discovered the constant presence of manganese in the human blood. Manganese was also found in 34 analyses of milk, 23 of which were human, 4 from the cow, and 4 from the goat.—*Med. Record.*

Medical Miscellany.

Lieutenant von Langenbeck, a son of the eminent surgeon of Berlin, has died of wounds received in battle on the 18th of August. The only son and the son-in-law of General Staff Surgeon von Grimm were both killed before Metz on the 18th. The sons of Dr. Simon of Berlin, Dr. Stilling of Cassel, and of several other medical men, have been wounded—the son of Dr. Laner, Physician in Ordinary to the King of Prussia, severely.—*Brit. Med. Journal.*

Jewish Physicians in Rome.—Although Roman history mentions a large number of celebrated Hebrew physicians, who attended former Popes in cases of severe sickness, and although Leo X.'s body physician was a Jew, the practice of medicine is at the present time allowed to Jews only on the condition that they confine themselves to members of their own religion. A Hebrew doctor, who, two years ago, attended to a Catholic who had fainted in the street, and visited him at his special request, at his home, escaped punishment only through the intercession of some influential persons. The practice of pharmacy in Rome is absolutely prohibited to Jews.—*American Journal of Pharmacy*, from *Pharm. Zeitung.*

Old Dr. Heim, of Berlin, was as original and eccentric as he was celebrated. He used to treat annually as many as 3,000 poor people ; but, on the other hand, he demanded liberal fees and respectful treatment from great people. One day the Palatine of Hesse, while on a visit to Berlin, went to consult him. Seeing that the Prince remained seated when he entered, Heim said abruptly, "Would your Highness please to stand up for a moment?" The astonished patient did as he was bid. "So; that will do; now, please to turn about once." This having been done, he remarked, with a musing sort of manner and in a leisurely tone, "Hum! Just as stiff as I should have expected a Palatine to be?"—*Exchange.*

Substitute for the Forceps.—A British medical officer, travelling in India, met with a case of labor requiring the forceps. Not having any instruments at hand, he sent for some dancing-girls, and selecting the one with the smallest hands, caused her to introduce them after the manner of forceps, and so to effect delivery.—*Pacific Med. and Surgical Journal.*

Two more deaths from ignorance or carelessness of druggists' clerks were reported last week. At Batavia, in this State, a young man was given eighty grains of tartrate of antimony in mistake for a dose of salts (so the Albany *Evening Journal* has it, although such an error seems almost inconceivable), death ensuing in a few hours; and in Bridgeport, Connecticut, a girl aged twelve was killed by the substitution of morphine for quinine in compounding a prescription. When shall we have laws prohibiting the dispensing of drugs by any save graduates of a College of Pharmacy?—*N. Y. Medical Gazette.*

Translation of Professor Helmholtz to Berlin.—Heidelberg is shortly to lose its most famous professor, who has received a summons from Berlin to fill the chair of the late Professor Magnus. This is indeed a chair of Physics, while that of Helmholtz at Heidelberg is Physiology; but our readers are well aware how high is the rank he also holds as a physicist and mathematician. It is indeed from a combination of these various sciences that some of his most celebrated physiological researches have resulted.—*London Medical Times and Gazette.*

To Correspondents.—Communications accepted:—A Case of Delirium Tremens successfully treated by Hydrate of Chloral.—The Tendency of so-called Local Diseases to Generalization.

Erratum.—In the article in the Journal for last week entitled "Stricture of the Rectum," &c., concluding sentence, for "a priori peritonitis," read *a prior peritonitis.*

The attending physician's name was not mentioned in connection with the autopsy. This was because of his necessary absence from home. E. P. H.

Married,—At Norton, 21st inst., Frank A. Shurtleff, M.D., of Somerset, to Miss Martha A. Godfrey, of Norton.—At Paris, France, 30th ult., Frank Livermore, M.D., formerly of Cambridge, Mass., to Miss H. Lalla Clarke, of New York City.

Died,—At Provincetown, Mass., Sept. 24, Frederic Howard, M.D., of Randolph, aged 50.—At Galena, Ill., Horatio Newhall, M.D., aged 70.

Deaths in eighteen Cities and Towns of Massachusetts for the week ending Sept. 24, 1870.

Cities and towns.	Total.	Prevalent Diseases.			
		Cholera Infantum.	Consumption.	Dysentery and Diarrhœa.	Typhoid Fever.
Boston . . .	155	19	24	18	6
Charlestown	16	5	4	0	0
Worcester .	14	2	3	0	0
Lowell . . .	18	0	2	2	2
Milford . . .	8	0	2	0	0
Chelsea . . .	10	1	2	0	0
Cambridge .	31	5	1	4	4
Salem	10	1	1	1	2
Lawrence . .	11	3	2	1	1
Springfield . .	7	0	1	1	1
Lynn	16	1	6	1	2
Pittsfield . .	6	0	0	0	2
Gloucester .	12	0	3	0	4
Fitchburg . .	1	0	1	0	0
Taunton . .	7	1	2	0	0
Newburyport	3	0	1	0	0
Fall River .	8	1	1	1	2
Haverhill . .	3	0	1	0	0
	336	39	57	29	28

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Sept. 24th, 155. Males, 76 ; females, 79. Abscess, 1—accident, 5—asthma, 2—inflammation of the bowels, 2—congestion of the brain, 3—disease of the brain, 6—inflammation of the brain, 1—bronchitis, 2—burns, 3—cancrum oris, 1—cholera infantum, 19—consumption, 24—convulsions, 4—croup, 3—debility, 1—diarrhœa, 14—dropsy, 1—dysentery, 4—scarlet fever, 4—typhoid fever, 6—disease of the heart, 5—infantile disease, 2—intemperance, 1—disease of the kidneys, 2—disease of the liver, 1—congestion of the lungs, 4—inflammation of the lungs, 5—marasmus, 6—old age, 3—paralysis, 2—peritonitis, 1—pleurisy, 1—premature birth, 5—puerperal disease, 1—suicide, 1—unknown, 9.

Under 5 years of age, 73—between 5 and 20 years, 15—between 20 and 40 years, 29—between 40 and 60 years, 24—above 60 years, 14. Born in the United States, 103—Ireland, 39—other places, 13.

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Original Communications.

CASE OF LOCOMOTOR ATAXY.

By FREDERIC WINSOR, M.D., Winchester.

P. A., 38 years old, merchant. January 17th, 1870, I was asked to take charge of him. He was in bed (where he had been since December 31st), lying easily on back, skin anæmic, and at same time having a slightly livid and ghastly look; considerably emaciated. Pulse 116; resp. 28. Pupils and tongue act normally; the latter is slightly coated. Is very deaf, so that he watches closely the mouth of the person talking to him, even when the voice is much raised. Sensibility and temperature of legs below knee somewhat diminished, and motor power still more diminished, so that he cannot get his legs out of bed without help. Bladder is only emptied by catheter, though some urine usually passes when he has a stool. Voice markedly strong; words well enunciated. Eyesight perfect; lies in a strong light without annoyance. Motion and sensibility perfect in arms and trunk. When asked to sit up, he begins the action quite strongly with the muscles of the trunk, and then assists and completes it by placing the hands on the bed behind.

Thorax.—Sounds of heart are normal. Percussion over left lung gives nothing abnormal before or behind; over right lung it gives marked flatness from apex to third rib; below that line there is resonance slightly more than normal. The entire right back is dull. Auscultation on left *front* shows that air passes freely to all parts, and with no obstructive sounds; expiration slightly increased in length, and, together with inspiration, somewhat exaggerated—perhaps no more than amounts to supplementary respiration. At the left *back* the sounds are not quite so distinct as they should be in one so thin, and there are a few loose râles. On the right front, over the upper lobe, there is crackling and blowing; below the third rib coarse râles in every direction. On the right *back*, sounds are less distinct and more bronchial than in front, but air apparently reaches the very base, though with bad râles. Voice not changed on left, and less changed on right than would be expected. Sputa very scanty—a greenish nucleus which sinks and a frothy surrounding which floats in water. His cough is not very frequent or urgent, and he has *no* uncomfortable feelings in chest or embarrassment in breathing, and cannot conceive that his lungs are not sound. He has no pain anywhere, and complains only of confused noises in his head; says if he could be rid of these he should gain at once.

When catheter is passed he does not wince in the least, although there is some difficulty on entering the instrument at the meatus; and subsequently he repeatedly lies during catheterization with his eyes closed and in a placid doze, always rousing when it is over and asking to see "how much." The urine is clear, even to the last drop drawn, and when subsequently tested it is acid, without trace of albumen. Urates and chlorides in excess. In the heavy precipitate, which fell as it cooled, the microscope showed abundant urates and some oxalates.

Now and then, while talking, he shapes his mouth to the word and delays uttering it for a moment in a curious way. Appetite is small, but he takes a very fair amount of nourishing food and of stimulants, which are perfectly well borne, and the fæces have a healthy appearance. So far as I can learn, he has been in very much the same condition since January 4th.

About December 7th (1869), he was noticed to have a very hard, dry cough, which continued for three weeks; his voice became noticeably hollow, and he was observed to shape his mouth to his words occasionally before uttering them. During this time he would sit silent through the whole evening, his head leaning on his hand, which also shaded his eyes, seemingly asleep, and taking no part in the conversation unless addressed, when he roused himself to show interest in what was going on. But talking provoked cough, and he soon relapsed into the seeming sleep. He lost appetite and strength, and about Dec. 21st he began to have night sweats, which continued about a fortnight and then ceased. Cough was worse at night. Up to Dec. 29th he attended regularly to his customary heavy and responsible business, and was only driven to consult a physician by the assurance that if he did not, one should be brought to him. When he went to the office of his physician (homœopathic), his pulse was found to be 110 and scarcely perceptible, and his whole condition was such as to startle the physician, who ordered him to take a carriage, drive to where he could get food and wine, and then take the train for home. After Dec. 30th he never passed the door of his chamber.

On the 31st of December, he was seen by Dr. F. Minot, who carefully examined his lungs, and arrived at essentially the same result with myself.

The prognosis was very unfavorable. January 1st, 2d, 3d, he was extremely weak and depressed, and a fatal and speedy termination was expected. Jan. 4th he began to improve, and was soon able to sit up more than an hour at a time.

It will be observed that the case, as thus far reported, shows two distinct sets of symptoms—one referable to the lungs, the other to the nervous centres; and when the previous history of the patient was investigated each set grew more interesting and peculiar. I will first report the pulmonary group. And to begin with, the patient declared all through his sickness that neither then nor during his previous life had he known *an uncomfortable sensation* in his chest, and for several weeks he could not believe that his medical advisers were not quite in error as to the condition of his lungs.

In April of 1868 he was one day seized with a violent paroxysm of coughing, which lasted five minutes or more, and ended with his spitting out several mouthfuls of bright blood. This was repeated for four or five days twice every twenty-four hours, coming on about 10 or 11 o'clock, A.M. and P.M., during which time he lost strength, but attended to business as usual. It then ceased and has never returned.

His throat troubled him from time to time, but not seriously. About eighteen years ago he was under treatment for his throat for a number of months.

In October, 1869, he was examined by Dr. Calvin Ellis, and his lungs gave *no indication of any disease.* Pulse too quick. During 1869, and previous to August, he lost 30 pounds of flesh, falling from 160 to 130 pounds in weight. Declared that up to Dec. 29th he never was aware of any shortness of breath, even in going up stairs or up hill. Dr. Buckingham examined him Jan. 16th, the day before I first saw him, and on comparing notes with him a few days later it appeared that we found almost identically the same signs—of a left lung but slightly if at all diseased, of a right with grave disease above and behind.

Jan. 25th, Drs. Buckingham and Ellis saw him with me. Resp. 22; pulse 112. Limits and degree of dulness as on 17th. Auscultation showed that the right back had become quite impervious to air, and the signs of cavity in upper right lobe were decidedly more marked. On left back more râles were found and there was slight dulness. At right back vocal resonance is very marked, and the sound is both hollow and squeaking. At the left back there is also some vocal resonance, probably transmitted from right. The voice, heard in the usual way, is markedly strong and distinct. Cough slight and not pressing; expectoration scanty; sputa slightly changed, the greenish centre being less marked and the whole more viscid. Neither pain nor discomfort in chest or throat. No pain anywhere. Is taking from day to day food and stimulants to an extent which would be satisfactory in a case of convalescing typhoid. For instance, he had yesterday two thirds of a large cup of beef-tea, two eggs in cider, a goblet of milk punch, a cup of tea, cup of gruel, glass of ale; all of which is well digested. Yet he grows weaker, especially in the legs.

From this time to Feb. 15th, the day of his death, the physical signs in the left lung grew gradully worse, but never became nearly so marked as those of the right, tending to growing dulness and râles. The sputa partook more and more of the pneumonic character, both in color and viscidity, and were raised with increasing difficulty, occasionally slightly streaked with blood; but to the last he would use neither spit-cup nor handkerchief, but turned and used the cuspidor at the bedside. Respiration averaged from 22 to 26 per minute. There was no dyspnœa, and the movements of the larynx were not marked till the last forty-eight or seventy-two hours.

Turning now to the group of symptoms distinctly referable to the nervous centres, which it will be remembered were the paralysis of the bladder, the diminished power and sensibility and lowered temperature of the legs—particularly of the right—partial loss of sensation in the rectum (so that he does not know whether it has been emptied till he looks into the close-stool), very marked deafness, which did not exist before he took to his bed, we will trace their history.

Both parents of the patient are living and in good health, though the father suffers much from lumbago. The son was born and grew up in Boston, attending the public schools till 16 or 17 years old, and never having to be absent a half day while in the High School. Directly upon leaving school he went into a store, and with most steady and thorough application worked his way up in mercantile life, allowing himself no holidays and devoting himself to his business. For fifteen years past he kept the books and managed the finances of a very large business, and when he fell sick no two persons could be found able to do the work which he had long carried on single-handed. His habits were temperate and very regular. He smoked, but not to excess.

In October, 1852, he was attacked by typhoid fever, from which he did not recover so as to walk in the street for five months, and during forty-two days he was either delirious or unconscious. He was also very deaf. *This was his only severe sickness.* He never had venereal disease.

In the spring of 1859 or 1860, he had external strabismus for weeks, and could only see clearly by squinting; also had muscæ volitantes. By the following June he became so blind that he had to be led about, and it was not till the following October that he completely recovered his sight, *which was never again impaired.* He did, however, often say at night that his eyes felt tired and "numb"; "as your hand does when asleep." During this time he consulted Dr. H. W. Williams and others, and spent some months at the seaside.

It was eight or nine years ago—probably in 1861—that he began to suffer from sudden and severe pains, sometimes in the heel, sometimes in one toe, or along the edge of the foot, the right being most affected. These pains increased in severity and in range, but did not extend above the knees. He was tormented with them at intervals during the next seven years—that is, till the summer of 1868—and would sometimes suffer without intermission for three consecutive days and nights. The pain was distinctly neuralgic in character and limitation, and was sometimes accompanied by a feeling of strong contraction in the part affected. The difficulty in urinating dates back about as far as the advent of these pains, and was always worst when they were most severe. Occasionally he had retention for forty-eight hours, but never had a catheter introduced, and, I think, never consulted a physician in regard to it. When the urine started, there was no jet; it "fell," and the last portion dribbled away. There was no incontinence.

Sometimes he had attacks of herpes, occurring in small patches on the legs, thighs or penis, preceded by burning pain for many hours, which was relieved when the vesicles rose. None of these eruptions had occurred for three or four years past.

These neuralgic pains were never relieved by anything but subcutaneous anodyne injections, but the constitutional effect of these was so marked and startling as to lead Dr. Ruppaner (who administered them several times) to refuse to repeat the operation. The patient, too, was disinclined to it. An injection of atropia was made two or three years ago with the same result of relieving pain, but caused such confusion of mind and locomotion and flushing of face, with dilated pupils, &c., I am told, as to prevent a repetition.

During the paroxysms of pain he dreaded to be touched below the knees, even by the brushing past him of a woman's dress, and would start when so touched in a way which was considered mere apprehension, but was more probably reflex nervous action. At the same time steady, firm pressure sometimes relieved the pain for a while, if his wife could get her hand upon the spot quickly and unexpectedly.

All this time he considered himself perfectly well, and declared he should "get the better of the pain." In the first half of 1868, the attacks grew less frequent and severe, and he was quite free from them from July 20th, 1868, to the spring of 1869, but in the intervening autumn and winter he often complained of disagreeable contractions in thighs and abdomen, but never of any sense of constriction round the trunk like a belt. These sensations ceased in the spring of 1869, when the old pain in legs began to threaten, but never returned with its former severity. In November, 1869, he had one sharp attack, his last.

Several years ago, certainly as early as 1867, he was found to have the greatest reluctance to walk in the street after dark, would not do so without a companion to lean on. He knew the number of steps leading to the doors of houses he frequented. About the same time he and his friends observed a swinging, round-about action of the feet and legs in walking, which he was accustomed to call "winging it." At times his walk was so peculiar as to give strangers the idea that he was intoxicated. This was when he was suffering from the pain in legs.

It was in 1869—probably in spring—that his gait was observed to be clumsy and straddling, and that he complained of his legs being heavy and clumsy. He walked like an old man, or like a little child learning to walk. There was also a growing inability to go straight to the point aimed for, when he rose from his bed or his chair, and in crossing a room he would sometimes go several feet wide of his mark.

In June last he had seminal emissions on seventeen successive nights, and during this time the paralysis of bladder was very troublesome. After the 17th night, these troubles never returned. Sexual desire had not been lost during all these years.

In November, 1869, while buying an "electric disk," the question arose whether he could stand with his eyes closed, and it was found that he could not for an instant. The experiment was several times repeated subsequently, and always with the same result.

He was habitually indifferent to cold, never warming his feet at the fire, and never caring to wear gloves except when driving in winter; but it was remarked that while his hands were always warm to the touch of others, his feet seemed equally cold to them. During the last year or two of his life, however, he grew to dread the winter, and wished to live in a milder climate. During his sickness it was noticeable how little discomfort he felt from being uncovered. His skin was fair, soft and supple to an unusual degree, but he had habitually a line of papular eruptions along the entire course of the spine, which disappeared after he took to his bed. Although a person of nice habits, he had a positive aversion to bathing, and experienced an evident shock from the application of water varying even a few degrees in either direction from 90°, except on the face and hands.

There was an habitual in-turning of the right foot, which had impressed itself on the shape and wear of the shoe; and as I watched the slow process of getting him out of bed to his reclining chair, I saw that the right foot seemed to *fall* in rather than to be *drawn* in. It dragged along the floor, while the left was lifted and moved six or eight inches with some accuracy. It was necessary to carefully smooth away every wrinkle or unevenness in the carpets at the bedside, as he tripped over the smallest obstacle.

Tickling the soles of the feet excited reflex action—or at least led to uneasy movement of the feet—much more decidedly than did pinching the legs and feet.

After attending him awhile, I found that he was not distinctly aware of the position of his legs in the bed, or in relation to each other.

Above the pelvis, the nervous power was but very slightly disturbed, except in parts governed by certain cranial nerves. Sensation and coördination were perfect (excepting the perception of temperature), and until he was evidently moribund, he took his cup in his own hand, and drank from it steadily. The only hint of disordered sensation in the upper extremities occurred within 40 hours of his death, when he had me recalled to his room, and told me with great clearness—illustrating with an expressive gesture—that he had had several times within a few hours a feeling as if he were "struck a square blow" on the front of the left shoulder. This was repeated two or three times, and occurred once in the right shoulder. It left no pain or numbness, and was accompanied by no twitching.

Deafness on both sides came on suddenly about January 1st, accompanied by confused sounds in head, and by confusion of ideas (the last not constant), but often arising when he lay quiet, and running into his sleep in a way that prevented his getting any rest satisfactory to himself. The noises he heard at first "behind the head," as well as within it, but soon they were referred wholly to the inside. A plug of wax was syringed out by Dr. Buckingham on the 16th of January, but hearing did not improve. He could understand a few sentences, spoken slowly and distinctly, without seeing the speaker, but would always watch the mouth of his interlocutor very closely when he could, and not infrequently failed to get the meaning. Of ordinary conversation, or noises in his chamber, he took no notice.

Taste was dulled, and he found very great difficulty in swallowing solids. It seemed that the process of preparing a morsel for swallowing could not be properly performed, and this not from insufficient secretion; for he could not often wash down the morsels with drink.

It has already been said that he had some difficulty in getting the word he wanted, and on waking, his speech was frequently indistinct, although the sleep had been light, and the mouth not very dry.

During the last fortnight of his life he had occasional hallucinations, but till within four days of his death he could hold business conversations with perfect clearness.

His pulse was steadily above 100, averaging 116, and sometimes up to 130, and he said it had always been found very rapid by physicians, and had twice led to delay in his obtaining policies of Life Insurance. I never found it otherwise than quite steady and regular.

He lived 29 days from the time when I was first called to him, and the progress toward death was very gradual, but very steady. The only new symptom that occurred below the waist, was a relaxation of the sphincters, which allowed slight dribbling of urine and escape of small amounts of homogeneous and semi-solid fæces, usually without his knowledge. There was no sloughing of skin anywhere, though there was a threat of it over the sacrum about three weeks before death, which passed off in a few days.

In common parlance death took place during sleep; sleep, which was a mild coma, gradually deepening for 60 hours, but broken by intervals of consciousness, and never becoming very profound.

Post mortem, by Dr. J. B. S. Jackson, 37 hours after death.

Heart, healthy. Blood in its cavities quite fluid.

Left lung, almost solid in its posterior half, and looking much like first stage of pneumonia; much of the anterior half crepitant, but nowhere as light-colored as healthy lung. Nothing like tuberculous deposit in it; in parts a frothy-red fluid oozed along the track of the knife.

Right lung, very strong adhesions at apex; two-thirds of upper lobe occupied by whitish spots, two to three lines in diameter, and distant from each other four to six lines; just behind and outside of the middle of the upper lobe was a cavity (empty) as big as a common fig. The rest of the *front* of the right lung was crepitant to the depth of about an inch; the whole lung behind this was solid as liver; mottled like a nutmeg on section. No "gray tubercles" in either lung. No effusion on either side.

Liver, kidneys, spleen, *bladder* all healthy, as were the *external* surfaces of stomach and intestines. Their interiors were not examined.

Head, skull thin. A few insignificant spots of plastic lymph on dura mater in neighborhood of longitudinal sinus.

Brain substance normal to the eye, unusually firm to touch.

Lateral ventricles all right. Choroid plexuses somewhat thicker than usual, and this condition of pia mater yet more marked over pons and medulla, but it separated from these parts as readily as usual.

Nothing unusual about base of brain or cerebellum, or upper two inches of spinal cord, which were all sliced thin, and closely examined. The dura mater of these regions was healthy.

The spinal cord, from the cauda equina to about ten inches up, was carefully removed. Nothing unusual was seen in the marrow or its membranes.

Dr. Edes thus describes the appearance of the cord under the microscope:

"On examining the fresh specimen, the posterior portion of the posterior columns presented a shining, semi-translucent appearance, somewhat different from the usual dead-white, though not very marked. The microscope showed this portion to contain vessels in a state of fatty degeneration, and many of the round, granular bodies called 'inflammation' or 'exudation' corpuscles scattered through the substance. I found nothing of the kind anywhere else.

"After hardening, its sections showed the nerve tubes in this region to be reduced in number and separated from each other by much more than the normal interval by granular matter, probably hypertrophied connective tissue. Some sections seemed to show the posterior roots of the nerves affected in the same way.

"I have made farther examination of the posterior nerve roots from your case, and find them very much atrophied. I believe I spoke doubtfully of this in my first report. The nerve tubes were much diminished in number, and the connective tissue, which resembled that of a common fascia or tendon, considerably increased."

To sum up the distinguishing features of this case: ten years back there was external strabismus, dimness of vision, finally almost complete loss of vision; recovery complete in six months (unless the frequent "numbness" of eyes is to be considered a remnant of this). A very quick pulse was probably found as early as this.

A year later, the characteristic pains in feet and legs began and continued seven and a half years; and coincident with them was incipient paralysis of the bladder.

Three years later, herpetic eruptions on thighs, legs and penis, occurring at intervals through three years.

Two or three years later, great difficulty in walking by night, and disordered action of feet in walking by day.

Three years later (two years before death), pain decreasing and localized contractions beginning in abdomen, thighs and penis; hæmoptysis.

One year later, straddling gait and inability to walk straight across room; general wasting.

Seven months before death, seminal emission; two and a half months ago, cough, changed voice, and stupor in evening; in another fortnight, night sweats; the next week, serious disease of right lung, prostration, deafness (breaking in at last upon steady occupation); in three weeks more, similar diseased action evident in left lung, steady increase of all symptoms till, in four weeks more, death occurs.

Equally characteristic are the changes of structure in the spinal marrow, as describby Dr. Edes, viz., substitution of connective tissue for the normal nerve tubes in the posterior columns and the posterior nerve roots; the partial disintegration of tissue and existence of exudation corpuscles.

These changes affected the posterior columns, &c., along the entire length of the specimen sent to Dr. Edes (viz., some eight inches of the lower portion).

The characteristic symptoms of the first stage of progressive locomotor ataxy (viz., a uniformly rapid pulse, disturbances of vision, and the shooting, shifting, intermittent pains) are plainly marked; and it is some four years before the second stage (as indicated by disorder in the coördinating power and the necessity of supplementing it by eyesight) declares itself. If failure of coördination in the arms is the distinguishing mark of the third stage, our patient never reached it; but I submit that the deafness, the impairment of deglutition, and the very peculiar lung lesions, may be referred to the same histological changes as the more familiar symptoms, and I very much regret that portions of the encephalon and the medulla were not sent to Dr. Edes.

The recovery (nearly, if not quite complete) from the grave disorders of vision with which the disease began to show itself; the absence of either diminution or exaggeration of sexual appetite; the deafness, and the clearness of the urine after so many years of bladder trouble, are points in which this case seems to differ from the ordinary course of progressive locomotor ataxy.

CASE OF URETHRAL CALCULUS.

By Ephraim Cutter, M.D., Boston.

In July, 1868, I was called to see a boy, 10 years old, who had been suffering from difficulty with his urine for four years and more. His clothes were wet with involuntary discharges night and day. At times he would be seized with paroxysms of agonizing pain, during which he would run about the apartment, unable to keep still. During his difficulties he had the benefit of various physicians, regular and otherwise, but with no relief. One of the most distinguished practitioners in this country examined his urethra with an elastic bougie, and detected a "false passage." He advised no surgical interference, but referred him for treatment to his local physicians. I found a large, globular, dense, painful, fluctuating swelling filling the lower abdomen up to the umbilicus. Dribbling of the urine, constant desire to micturate, pain in the glans penis, great general uneasiness and distress. I diagnosticated a distended bladder, and endeavored to pass an elastic catheter and failed. Then a No. 1 vesical sound was introduced; this had entered only a little way when it struck a hard body, with a metallic click, which proved to be a calculus impacted in the urethra. The point of impaction was at the scrotal part of the urethra. Beneath the fingers it felt dense and unyielding. As the indications were urgent to relieve the distention of the bladder, I succeeded in catheterizing it, passing the instrument by the stone. It was noticeable how the contractility of the bladder had been destroyed by the four years' stretching. It was necessary to press on the bladder through the abdomen before the contents would escape through the catheter, and then the walls of the bladder felt as if they were certainly half an inch in thickness.

At a subsequent visit ether was administered, and a forceps, such as is used for extracting polypi of the ear, was passed down on to the stone and firmly fixed. The calculus was then withdrawn to the urethral outlet with some stretching and care. An incision made through the frænum, lengthwise, afforded an exit for the calculus with but little hæmorrhage. It proved to be uric acid, oval, the size of a large pea.

There was but little subsequent difficulty. By pressing on the abdomen with the hand, he could evacuate his bladder with ease. The cut healed perfectly and speedily. The contractility of the organ increased as time elapsed, so that at present there is no trouble.

The strong point in this case is the importance of using metallic materials in carrying the sense of touch into the deep cavities. Had the physician named employed his metallic bougie he would have made a correct diagnosis and instituted proper treatment, with speedy relief to the patient. One should not, therefore, wholly rely on the evidence afforded by a non-metallic bougie in physical exploration of the urethra. I hope this point will be strongly and indelibly impressed on the reader.

Selected Papers.

CLINICAL ILLUSTRATIONS OF THE ANALOGY BETWEEN THE PROCESSES OF HEALTH AND OF DISEASE.

By JAMES RUSSELL, M.D., F.R.C.P., Physician to the Birmingham General Hospital.

THE inquiry which is connected with the subject of my present paper has much interest in relation not only to disease, but also to the processes of health; any light which it may throw upon morbid action will also be reflected upon the ordinary phenomena of normal nutrition. Disease is "nothing which the mind can grasp in the form of a distinct entity added to the human frame, but rather a deranged condition of the animal machinery;" hence it is of importance to compare the phenomena of health with those of disease, in order to learn wherein consists the derangement of the machinery of healthy nutrition, and what is the ultimate condition in which such derangement originates.

Now, upon these two branches of the subject our information is not always equally precise, and we must guard ourselves against being led by the knowledge we may possess upon the one to overlook our ignorance of the other. The class of epilepsies from which I shall take the illustrations I am about to adduce afford a very pertinent exemplification of the justice of this statement. Our knowledge respecting the action of the nerves in regulating the capacity of the minute arteries has opened a wide field of investigation, in which observations upon health and disease have mutually assisted each other; but in applying this information we have still to remember that in the phenomena of vascular action we are dealing only with secondary operations, and do not come down upon the ultimate changes upon which the specialities of vascular action depend. Thus in epilepsy we can explain the various phenomena which characterize the ordinary fit, by variations in the cerebral circulation, but in assigning such an explanation we by no means give an answer to the question, what are the ultimate changes in the central organs which are concerned in causing the fit? We only push the inquiry one step backward from the brain at large to that portion of the nervous centres in which the vascular nerves originate; the question still remains one as to the condition of nerve-tissue. It is on this account that the term epilepsy is so indefinite in its application; that it only indicates a particular state of nervous matter brought about by different kinds of lesion, with the nature of which we are but imperfectly acquainted. Such is the direction in which our inquiries have to look in order to give precision to our thought upon this class of maladies.

In this particular, however, our position in regard to morbid action is closely paralleled with that which we hold with reference to the processes of health, and here also the example I have just adduced finds a striking analogy with those normal processes which I shall have to adduce for the purposes of comparison. In the essays on sleep and its allied states to which I am about to refer, the authors, whilst satisfactorily alleging various states of the cerebral circulation in explanation of the phenomena they describe, yet find it necessary to extend their inquiry to that condition of the nervous centres in which such changes of vascular action take their rise.

One practical result of the greatest moment is derivable from this view of the subject; it exalts the necessity of keeping constantly in view the influence exerted upon the tissue of an organ by the function it performs, and of regulating such function, as the essential condition for preserving health. In no class of organs is this principle of greater importance than in the case of the central organs of the nervous system; perhaps in none is it less appreciated by the vulgar. It is too much imagined that a healthy state of the brain may be secured by regulating its physical nourishment. It is less generally recognized, at least so far as practice is concerned, that the proper regulation of its function is an agency of still greater power, though more difficult of attainment.

The illustrations I am about to adduce are derived from epileptic disease, and the condition of health with which I bring them into comparison is that of sleep in its various manifestations. In epilepsy and in sleep alike the most satisfactory explanation of the mechanism by which the phenomena are immediately produced is derived from variations in the state of the cerebral circulation of the minute arteries; and the parallelism which may be shown to exist between the healthy function of sleep and the abnormal state in epilepsy confirms the hypothesis which has been formed respecting each.

According to the valuable observations made by Mr. Durham, Dr. Hammond, and others, the condition essential for sleep consists in a diminished circulation of blood through the brain, indicated by the establishment of the "circulation of nutrition," as opposed to the "circulation of function," to quote the words of the first-mentioned author. In sleep, when perfect, the brain is placed in a condition best suited to its renovation after active exertion, and such a condition must enter into every idea of sleep. Hence sleep involves a delicate adjustment between the extremes of anæmia, on the one hand, which would produce one form of coma and would prevent nutritive restoration, and on the other of active circulation, which keeps the organ in a state of waking activity. In epilepsy the first stage of the fit is believed to consist in closure of the small arteries of the brain. Now, I have lately recorded in this journal a case of chorea which presented also attacks of an epileptic nature, wherein the patient passed from sleep into a state of perfect insensibility, from which the most violent measures could hardly arouse her, yet which yielded to the inhalation of chloroform. It is further of much interest in relation to the phenomenon of dreaming, that whilst entirely unconscious to external events, she sang, talked and even recited poetry.

But a state of troublesome wakefulnes or else of disturbed and imperfect sleep is a much more common attendant upon epilepsy. More than half of the patients from whom I have made inquiry upon this subject have admitted the presence of this symptom, and many have referred to a marked change having taken place in their sleep coincidently with or subsequent to the establishment of their fits. In some cases the alteration in question is most strongly insisted upon, and indicates a transition from comparatively tranquil sleep to a state of great disturbance.

There are some instances in which the connection between epilepsy and bad sleep is still more direct, the patient alleging the coincidence of disturbed sleep with the occurrence of particular fits. Some have spoken of several sleepless nights as habitually following a bout of fits, and in one instance the sufferer even employed this wakefulness as a kind of warning.

It is well known that continued mental activity is the great opposer of sleep, and there is no form of mental activity more powerful in this respect than emotional excitement. Now the observers whom I have quoted, state that in active conditions of the mind, the circulation through the brain is quickened and the supply of blood is increased; this circumstance directs our attention to the unstable condition of certain parts of the nerve centres in epilepsy, and especially of the centres which govern the nerves supplying the cerebral vessels, as not unlikely to be concerned in producing the irregularity we note in the function of sleep. The instability may manifest itself, not only by causing contraction of the arteries, as in the fit itself, but also by permitting their dilatation at unseasonable periods, as actually occurs in cases of vascular turgescence to which I shall have to refer presently.

Dreams, says Mr. Durham, "are associated with those states of cerebral circulation, which have been mentioned as intermediate between the states which respectively characterize perfect repose and perfect activity or wakefulness of the brain," and a tendency to dreaming is also very prominent in the disturbed sleep I have been describing. But the dreams to which epileptics are liable, possess an interest of a different character, related to a peculiar form of delirium which frequently mingles with the other phenomena of epilepsy, characterized by suddenness of occurrence, temporary duration and the remarkably shifting and impulsive nature of its manifestations. The analogy which subsists between delirium and dreaming, has naturally attracted the attention of all who have written upon the subject. Now in epilepsy the account I have received respecting some patients as to what has occurred in their dreams, offers a very striking resemblance to the description given of the milder form of delirium from which others have suffered. The patients talk, "moither," shout, cry, "ramble" in their sleep. They wake in terror, with eyes glistening, heart palpitating, a wild expression of face, and in a profuse perspiration. Occasionally they see spectres. In some cases the acts of the dreamer are of a more special character. A boy always seemed in trouble; he was constantly trying to save from drowning his mother and his younger brother, and always selected these two members of his family as the subject of his dreams. His mother had for a long time been obliged to sit by him twice or thrice a week, and sometimes for several nights in succession. A child awoke screaming, threw up the window and leapt through; she looked greatly terrified, and "her screams were fearful." A girl started up in bed declaring she saw men getting in at the window, her eyes being widely open, and she remained in this condition for two or three hours. A woman dreamed that her child was not her own, and in her sleep went down stairs, hoping to find some one to take charge of it; she then returned to her own room, thinking how foolish it was to keep the child; she opened the window, and was "considering" about throwing it out, when, luckily, some one entered.

Somewhat analogous to the dreaming state was the waking condition described to me by a lady, the subject of epilepsy and of epileptic delirium. She had "an idea entering her mind," but could give no more definite description of the state. The idea became more vivid before a fit, and was always accompanied by a sense of dread. Subsequently "the idea" was replaced by a tendency to trace tunes in her mind, opera tunes, chants, etc. The same tune would be present sometimes for a day or two. "Oh, if I could but change it!" she exclaimed.

I should, however, state in passing that I do not find any constant connection between tendency to disturbed sleep and to delirium in the same patient.

I may mention here one point of resemblance between many dreams and epileptic delirium; that in the latter the patient generally has no recollection of what has taken place during the period of intellectual derangement. And one other subject remains in illustrating the analogy between the delirium of epilepsy and certain states of mind which belong to the normal condition; I refer to the extreme irritability of temper which epilepsy induces, and which sometimes coincides with a tendency to delirium. The description occasionally given of the violent and causeless passion into which the patient is thrown on the most trifling provocation cannot be distinguished from that of an attack of delirium; he is for the moment dangerous to those around, and even commits serious mischief. In one patient whom I had the opportunity of watching through several years, the transition from mere petulance after a fit to evident delirium was very interesting. At first he was quarrelsome, then strange "and wandering," and finally fell into violent delirium.

One of the most interesting phenomena of sleep is somnambulism, and epilepsy occasionally presents a very close resemblance to that singular condition. Somnambulism "is a dream put into action," and verifies the correctness of Cicero's remark, as quoted by Dr. Holland, that if it had been so ordered by nature that we should actually do in sleep all we dream, every man would have to be bound down before going to bed. In ordinary cases of somnambulism the actions are directed by some dominant idea possessing the mind, though removed from the influence of the will, and not connected with the ordinary waking condition by the link of memory. The individual, to quote Dr. Richardson's words, "pursues an act of consciousness of which he is not self-conscious; he presents to us, *i. e.*, a mere objective consciousness."

Now, somnambulism may be produced artificially. Dr. Richardson has recorded some interesting observations in the Reports of the British Association, 1865, p. 274, showing that a state analogous to somnambulism sometimes follows the inhalation of amylene. A patient was entirely senseless, and in this condition underwent a severe surgical operation; yet "she talked with considerable correctness on the topics of the day, seizing objects with precision." He experienced proof that he had produced the same condition in his own person, though quite unconscious of his acts; and he quotes a like instance witnessed by Dr. Snow, in which a child played with a ball, throwing it into the air, catching it with precision, talking and laughing all the time, yet to all appearance perfectly unconscious.

Certain phenomena prove that varying conditions of different parts of the brain, as regards the state of activity, may be consistent with the continuance of sleep, though whether with what is understood by the perfect form of that condition has been differently interpreted; it seems certain that some portions of the organs may be asleep whilst others are, at least partially, awake.

Now in particular forms of the epileptic fit we may witness a very interesting series, variously approaching somnambulism, and illustrating different modifications as regards consciousness, and the performance of automatic acts.

In the mildest fits the patient very frequently does not fall, and that such is not merely due to the extreme brevity of the fit seems proved by the fact that others, in an equally brief attack, will instantly drop and recover in a moment. Again, in certain fits the patient saves himself from falling by laying fast hold of some object. This is not unfrequently the case in the slighter varieties, but it will sometimes happen in fits of considerable severity.

But in some cases the automatic condition involves the mental function, and approximates the state of delirium. One little girl obeyed directions whilst in the fit, though after it she was quite unaware of what had happened. Another talked mechanically, yet was so insensible of outward impressions that she fell on the fire without being conscious of pain. Some exhibit a singular mixture of automatic talking and automatic acts; *e. g.*, a man began to rub his hands, to wipe assiduously a book he was holding at the time, looking around with a vacant expression, and talking like a man intoxicated; his face was pallid, his pupils unchanged. A young man suddenly leaned against his neighbor; he began to rub one hand against the other, and to wipe his mouth with his shirt-sleeve; looked around with a saucy expression, and asked what we were going to do with him, then came to himself. The same state may introduce a fully developed fit. I was sitting by my patient when he touched me to call my attention to himself. His breathing became hurried and irregular; his pulse feeble; the action of his heart tumultuous; he called out, "Oh! dear," in evident distress, but continued to talk clearly and connectedly in reply to our observations, and observed that this was a different "queer" from his usual ones; immediately afterwards he passed into a very severe attack of bilateral convulsions with perfect unconsciousness, widely dilated pupils, and internal strabismus of the right eye as the fit passed off. It is to be remarked that most of the subjects of these exceptional fits also suffer from others of the ordinary type.

But there are many cases which imitate yet more closely the evidence of somnambulism, without, however, affording any evidence of a purposive character; one patient begins to walk backwards in her fits; another, a puddler, does not fall, but if at the furnace only stirs the iron more vigorously, and without discretion; yet another walks about in a state of complete objective unconsciousness, followed by his fellow-workmen, who guard him from injury; he comes to himself in ten or fifteen minutes, and then is "very heavy for sleep." A remarkable instance of a similar kind is afforded by a man, who, in addition to convulsive fits, has what he terms "bewildering spells," in which whilst at work, he leaves his tools, suddenly starts off to walk right onwards, and when conscious finds himself at a considerable distance from the spot whence he started. Another man gave me very much the same history. One other patient curiously united somnambulism with epilepsy. When she had her fits during the night she frequently, at their termination, found herself out of bed, and completely dressed.

I notice briefly in conclusion variations in the supply of blood to different parts of the body, visible externally, or else manifested by increased activity of some glandular organ, as it is in the brain by restlessness and dreaming. It is needless to advert more particularly to the healthy phenomena with which such phenomena connect themselves.

I may allude first to the pallor of the face which appertains to the first stage of the epileptic fit. It is in the minor fits that this pallor is most noticeable; in these attacks the larynx often escapes, and therefore suffusion of the face does not necessarily obliterate the paleness which precedes it. Hence, in the description which the patient gives of the fit in question, the absence of color in the face holds the most prominent place, and evokes such expressions as "paleness, deathly pale, aspect of death," etc., which are very frequently employed; and the term "faint fits," ordinarily applied to this form of epilepsy, sufficiently indicates the kind of impression which this symptom makes upon the mind of the beholder. I may refer in further illustration of this part of the subject to a paper by Dr. R. Reynolds (*British Medical Journal*, December 26, 1868), which presents some illustrations of local interference with the circulation in the limbs through paroxysmal affections of the vaso-motor nerves.

The opposite condition, however, that of preternatural vascular fulness in some particular part, sometimes presents itself in connection with epilepsy, due to that unstable condition of certain nerve centres, which is indicated besides the fit by frequent starts, cramps, vertigo, headache, and others—the so-called inter-paroxysmal symptoms—in which, however, it is probably true that contraction of vessels is a more frequent phenomenon than dilatation. Of course these phenomena of vascular turgescence occur, we notice, in connection with epilepsy only as a part of a much larger series of similar changes in other conditions, but I confine my remarks to epilepsy. Thus, a lady who suffered from every kind of epileptic fit, both gravior and mitior, and from epileptic mania besides, presented a remarkable series of variations in the character of the small fit—passing vacancy, with "set" aspect of features, and entire forgetfulness at the moment; then brief but perfect unconsciousness, dilated pupil and general slight tonic spasm without falling; then a haunting "idea" or a persistent tune; and also attacks of peculiar flushing, the neck and face becoming suffused with a deep blush, which reached even to the fingers, and was attended with subjective heat and a sense of oppression or suffocation.

Another case presented in a different form an analogy with shingles, in being accompanied by an affection of a sensitive nerve. The fit began with a pain in the left foot, running up the left side of the trunk, and then involving the left arm and cheek; as it reached the upper teeth, where it was exceedingly acute, a circular patch of vascularity, about the size of half-a-crown, appeared in the cheek. It continued about ten minutes, and when it left, the pain subsided also; a red mark also, called by the mother a "vein," followed the course of the pain up the arm. The phenomena recurred frequently, but never under my observation.

I have reported in this journal an interesting example of unilateral sweating occurring in paroxysms with other epileptic phenomena. The outbreak of the perspiration, which was very profuse, was preceded by a sense of such intense heat, that the patient did not doubt, on the first occasion, that his shirt-sleeve had taken fire, and at the same time the cheek became so much suffused as always to give notice to the patient's wife of what was about to happen. He suffered from constipation, and was always worse when his bowels were confined. A slight degree of lachrymation on the affected side accompanied the sweating, with some dimness of vision, probably from impaired accommodation. In the same number of this journal with my case appears a similar case from the practice of Dr. Ramskill, the perspiration being nearly limited to the region supplied by the fifth nerve; two others are added, in which unilateral facial sweating co-existed with paralysis of the cervical sympathetic from pressure.

In another case, the child's mother informed me that during the fit the left side, which was rigid, was covered with a cold sweat. In a girl, perspiration having a strongly acid smell broke out over the entire body with the fit; she had *tœnia*. A man was similarly affected in every fit; "before the perspiration comes he feels hot all over him like as if in a fire." The perspiration saturated his flannel, and had a peculiar earthy odor. He stated that whilst it was present the surface of the body was pale; he also suffered from constipation; and a boy perspired so profusely in the fit that his mother was obliged to wrap him in flannel to prevent him from taking cold. Similar phenomena are recorded in two cases of epileptic mania, in one of which the patient suffered from constipation. I regret that I was unable to witness the attack in any of these cases.

Salivation and lachrymation are also mentioned in connection with the attacks in certain of my cases, in one or two attended with pain in the fifth nerve.—*London Med. Times and Gazette.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY. REPORTED BY F. W. DRAPER, M.D., BOSTON.

The Society resumed its regular monthly meetings Saturday evening, Sept. 24th, the President, Dr. George C. Shattuck, in the chair.

Dr. ——— introduced to the Society a boy, 4 years old, who, until last March, had been perfectly well. Since that time he had been attacked successively with meningitis (accompanied with coma and hemiplegia), diarrhœa, aphthous sore mouth, scarlatina, and finally with pleurisy and empyema. Paracentesis was performed by Dr. Bowditch, and sixty-two fluidounces of purulent fluid were withdrawn from the pleural cavity. Immediate relief and rapid recovery followed, and the child is now well.

Dr. Cutter remarked that complete recovery in such cases depended in great measure on the perfect expansion of the lung after tapping; and that, in turn, depended on the adhesions of the pleura. He mentioned a case of effusion in a patient fifty years old; the withdrawal of the fluid by tapping was the only treatment, and recovery was perfect. He also cited another case in which were present all the rational and physical signs of effusion into the pleural cavity; paracentesis was attended with the escape of only a small amount of blood, and *post-mortem* examination discovered the lung and pleura to have degenerated into a mass of encephaloid cancer.

Dr. Cheever exhibited and described three instruments which have been recently introduced. One of these was a clamp or forceps to be applied to the upper lip for the purpose of steadying the part and to prevent hæmorrhage during the operation for hare-lip. Another was a forceps for dilating the incision in the trachea in tracheotomy; it consisted of three blades, two lateral, and a third so adjusted that as the lateral blades opened the other was retracted and shortened, giving space for the introduction of the tube. The pneumatic aspirator of Dr. Dieulafoy was also shown; it comprises an exhausting syringe, like that in ordinary use as a stomach-pump (the cylinder being of glass), and various sizes of subcutaneous needles. Dr. Cheever thought it would be of great service in making exploration for diagnosis, the nature of fluids in the deep-seated cavities being thus determined without opening them to a harmful extent. He had himself used the hypodermic syringe for this purpose.

Dr. Wheeler, of Chelsea, exhibited a tumor which he had removed from the breast of a woman 32 years old. It was a non-malignant growth of nine years' duration. Its recent rapid growth, its offensive discharge and its weight indicated its removal.

Dr. Cutter read notes of a case of fibrous naso-pharyngeal polypus. It occurred in a girl of 15 years, inducing obstructed respiration and deglutition and intractable conjunctivitis. It was removed by means of a wire écraseur, which was shown to the Society. The tumor recurred seven months after, and was again successfully removed with the écraseur.

Dr. Cheever said that the most important question in connection with such growths was with regard to their recurrence. It is well known that uterine polypi will undergo spontaneous degeneration after their partial removal; but it was his opinion that fibrous tumor originating in the periosteum required very radical extirpation to prevent their re-appearance. In one case of his own, the growth had reappeared after the point of section of the pedicle at the base of the cranium had been freely cauterized with strong nitric acid at the time of the operation. At the second operation the periosteum and adjacent bone were gouged away with a chisel, and there had been no recurrence.*

Dr. William Ingalls reported a case of progressive muscular sclerosis in a child 5 years old. The case presented the symptoms described by Duchenne—muscular debility, marked curvature forward of the dorso-lumbar region of the spine, tottling or waddling gait, hypertrophy of the muscles of the calves, and finally death from pneumonia.

Dr. Webber read a paper presenting a complete *résumé* of all that is known up to the present time of this rare and interesting disease.†

A brief discussion followed as to the points of resemblance between this disease as represented in the case reported and tetanus, after which the Society adjourned.

Medical and Surgical Journal.

BOSTON: THURSDAY, OCTOBER 6, 1870.

CLIMATE OF THE BAHAMAS.

WE are indebted to Mr. Cleveland, of Nassau, N. P., for a pamphlet giving a description of that city, including certain facts which are of interest to the profession, especially at this season of the year when patients are debating in their minds the best resting place from the rigors of our northern winters. We have already ourselves contributed an article to this JOURNAL‡ on the Medical Resources of the Island of Madeira, and we have lately made arrangements for communications of a similar nature, on the climatology of Minnesota and other winter resorts, which we hope soon to lay before our readers.

We make liberal extracts from the work of Mr. Cleveland.

"The Bahamas are a numerous group of islands which lie on the east coast of North America, north of Cuba and St. Domingo, encircling and almost enclosing the Gulf of Mexico to the northward. These islands are twenty-nine in number, and without exception of the same geological character, being formed of calcareous rock, composed of coral shells and marine deposits, hardened into lime-stone more or less stratified, and abounding in fossils of recent and living species.

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* Vide JOURNAL, vol. iii., N. S., p. 95.

† The report of the case and the essay will shortly be published in the JOURNAL.

‡ JOURNAL, May 12, 1870.

"New Providence is the most important of the group; Nassau, its chief and only town, was settled by Europeans in 1629, since which time it has been the seat of government. It is situated in North latitude 25° 5′, and west longitude 77° 20′, covering an area of 85 square miles, with a population of about 12,000. * * * *

"New Providence has been noted for salubrity of climate for many years, but events connected with its early and recent history have so prejudiced the minds of Americans, and led to such false impressions, that only to those who have had more intimate knowledge of the Island has the idea of an even transient residence been sufferable. * * * * In no country will the traveller find better society, or more kind people, than among the European and native inhabitants of Nassau. * * * *

"Peter Bruce, in his memoirs (1732), says of the climate :—'The Bahama Islands enjoy the most serene and the most temperate air in all America, the heat of the sun being greatly allayed by refreshing breezes from the east, and the earth and the air are cooled by constant dews which fall in the night and by gentle showers which fall in their proper seasons, so that they are free from the sultry heat of our other settlements. They are as little affected with frost, snow, hail or the northwest winds, which prove so fatal both to man and plants in our other colonies."

A table taken from Gov. Rawson's "Report of the Bahamas" for the year 1864, accompanying the blue book of the colony, gives, in a series of observations taken for ten years, as the mean monthly maximum of the thermometer at 9, A.M., 82°; and the minimum, 71°. The maximum of the thermometer for the summer months is 88°; the minimum of the winter months is 66°. The mean monthly rain-fall is 4·6 inches.

"The mean height of the barometer is exactly 30 inches. The greatest maximum heat exceeds the average heat by not more than 12°. The greatest minimum falls short of it by 10°; the extreme variation is therefore 22°.

"From these observations, two important deductions will be made. First, that the average temperature from November to May inclusive, is exactly that at which outdoor and indoor life are best combined; always above that, at which artificial heat becomes necessary, and always below that at which exercise becomes exhausting. Second, that the variation between extreme limits of temperature is comparatively small, and that these limits are those within which any variation is of the least possible importance to the health or comfort of the individual. Moreover, the mean barometrical standard indicates a light or rarefied atmosphere, and the average rainfall for a series of years during the season of resort, demonstrates one of unusual dryness. If, then, the climatic desideratum for invalids suffering from pulmonary disease is, as indicated by medical authorities, 'a dry, rarefied atmosphere at equable temperature,' the climate of Nassau fulfils the indication not only to an unequalled but also in a marvellously perfect degree. How perfect, will become evident by comparing it with Madeira, South of France, or Southern United States of the Atlantic Coast!

"Regarding the sanitary state of the Bahamas, we quote again from Gov. Rawson's Report:—

"'These Islands are, without exception, remarkably healthy. They are free from, and are seldom visited by, epidemic diseases. Intermittent fevers, which prevail to so great an extent on the neighboring continent, are comparatively infrequent here, and usually assume a mild form. During the last thirty-five years Nassau has been visited by cholera once, viz., 1852; by smallpox in 1845 and '60, when it was introduced, in both cases, from St. Domingo; and by yellow fever at distant intervals, and attended with very slight mortality—viz., 1829, '45 and '53, until 1861–62, when, from transient circumstances, it assumed a more malignant form.'

"In 1864, yellow fever was again introduced, as also to a slight extent during the last summer (1869). In both cases this is accounted for by the presence of large numbers of strangers; in the first instance, of those engaged in 'blockade running,' and, during the past summer, those connected with the Cuban revolution. The entire number of fatal cases during the summer of 1869 did not exceed twelve, including those who died on vessels in the harbor.

"As foreign traffic is less, epidemics as well as sporadic cases of yellow fever and cholera have been much less numerous than in New York. But as such instances occur *only* during the summer, when visitors are away, the subject has no interest in our present inquiry. During the last season, no known case of intermittent or remittent fever has occurred, either at the hotel or among the white population of the Island. It may, therefore, be considered certain that no disease that takes epidemic form is indigenous to the Island, neither can such diseases exist there, except to a very limited extent when introduced from foreign ports, and even in such case *only during the summer months.*

"The city of Nassau is built on the northern side of the Island, which slopes down to the water's edge, affording sure and perfect drainage. It extends along the water front for about three miles, and back to the crest of the slope, on which stand the Government House, the Royal Victoria Hotel, and many of the finest private residences. The streets are laid out at right angles with each other, and are uniformly macadamized, as are also the drives around the Island. The houses are, for the most part, built of stone, and the grounds surrounding them are ornamented with flowers and trees. The city has a fine public library of over six thousand volumes. Nassau has almost as much right to be called "the City of Churches" as our own Brooklyn. All creeds find themselves at home in the services of the various churches and chapels.

"The drives are not to be excelled—the roads being equal to the best; the scenery, both seaward and inward, being varied and beautiful. The harbor and neighboring waters afford at once a safe and extensive boating ground, while the shores are covered with marine treasures, in the form of shells and corals. In the interior and on the out islands, game abounds to reward the labors of the sportsman; while the adjacent waters supply fish in abundance, and unrivalled for beauty and size."

The Royal Victoria Hotel, built by the Colonial Government to meet the demand of invalids and others seeking to avail themselves of the natural advantages offered by Nassau for a winter residence, offers every convenience and comfort to its guests. It is now kept by two New York men, and the testimony of many of their guests is evidence of their ability to serve the public in the proper way.

"Nassau is at present in direct communication with New York by the Atlantic Mail Steamship Co.'s steamers, which leave every fourth Thursday, viz., Oct. 6th, Nov. 8th, Dec. 1st, Jan. 26th; fare, forty-five dollars, gold. On February 1st, the present contract between the Bahamian Government and this Company ceases, after which time a fortnightly steam communication is to be established."

A STUDENT'S NUMBER.—It is our purpose to issue, on the day following the delivery of the Introductory Discourse before the Medical School, an enlarged number of the JOURNAL, which will be especially devoted to the interests of the young men commencing or pursuing their medical studies. It will contain such advice as may be valuable to students, as well as information which shall lead them to make the best use of the means offered by our city for the acquirement of a sound medical education.

We cordially invite the members of the profession to aid us in this proposed plan and to send us appropriate communications at an early day. Our Publishers call attention to the opportunity which a considerably increased issue on that day will offer for the interests of advertisers.

THE MEDICAL TIMES.—Our young cotemporary starts off with flying colors. Its first number has found its way to our table, and we welcome it as a friendly token of the good will of the profession in the City of Brotherly Love.

The project of a new medical journal in Philadelphia was first considered in April last, when a meeting of over one hundred physicians, including the most eminent and active members of the profession, was held, and the publication of the *Medical Times* was determined on. The most ample assurance as to the value and variety of the original communications that its columns will contain is afforded by the list of these names, as well as of the writers in other cities who have promised their aid.

"*The Medical Times*, therefore, appears as the result of no mere private enterprise, nor as the organ of any school or party, but as a journal which may fairly claim to represent the medical profession and medical interests in Philadelphia.

"This is, however, far from being its sole object. The position to which it aspires is one free alike from local interests and from partizan spirit. The only aims which shall be recognized in its management are the advancement of medical and surgical science, the detection and reform of abuses, and the promotion of the interests of the profession at large. Animated by such aims, we ask for it a welcome, not only from the physicians of this city, but from those of the entire country."

Dr. Horatio Newhall.—Dr. N., whose death in Galena, Ill., has been recently announced in this Journal, and in the daily papers, emigrated to G., as a pioneer, from this part of our State, when a young man, and grew up with the place. He graduated at Harvard University, in the class with George Bancroft and Caleb Cushing, and, after receiving his medical degree, went at once to G., by the advice of Dr. James Jackson, who had been applied to for some one to go out to that place. Dr. H. was a man of sound mind, well educated, irreproachable in character, and through a long course of successful practice, to which he entirely devoted himself, he commanded the respect and confidence of those about him. Within the last few years he has had symptoms of affection of the heart, though he was in Boston to visit his friends last year, and he has recently died at the age of 73 years. The death of one whose whole course of life has added strength and given dignity to our profession in the community in which he lived, is an event that ought not to pass unnoticed; and our friends who leave us to go off and practise in distant parts of the country, ought not to feel that they will be forgotten. Dr. N. left a large family, and one of his sons, who received his medical degree here about two years ago, has established himself in Galena, and will, it is to be hoped, stand as high in the profession as his father. Dr. N. left also two brothers—both of whom reside in Dorchester—Cheever Newhall, Esq., the well-known agriculturist, and George Newhall, Esq , a retired merchant and a highly respected man. J.

"Nothing is Law that is not Reason," but what is Reason should be Law. *Messrs. Editors,*—The Journal neither attempts to disprove the facts nor to refute the arguments adduced in support of what it pleases to call my "theory of the rights and privileges of the Massachusetts Medical Society"; perhaps because the facts are stubborn and the arguments unanswerable. As the Journal is everywhere recognized as the organ of Harvard Medical School and of the regular profession in Massachusetts, it might have been expected to coöperate with the Society in the reform inaugurated at the annual meeting in May ult. But no, it was the first to "throw cold water" on the Society's effort to redeem its lost honor, the first to challenge the legality of the resolution and so to put weapons in the enemy's hands. True, the Journal denounces "quacks" in general terms. But this is beside the present issue. Nor will the profession feel assured of the Journal's fealty to honorable and legitimate medicine until it shall heartily engage in the work of purging the Society, until it shall cease to act like one who, when a corner of his house takes fire, wrings his hands, crying, "Oh, how dreadful—but it can't be put out, there's no use trying!"

As for the Society, better that it reorganize than fail in the duty it has undertaken.

"Champion of the anti-homœopathists"! Messrs. Editors, I accept the title, adding, and of the antis everything that is irregular and unprofessional. Who is my antagonist? Par excellence the Journal, which, by arraying itself against me, becomes and virtually proclaims itself the champion of the homœopathists. In all sincerity I ask, is it their self-appointed, because sympathising, defender, or on what other ground will it explain its course? My thanks are due for the courteous manner in which, by placing in marks of quotation words of mine, the Journal calls attention to important passages in my recent communication. I conclude by remarking that ridicule is not reason, though often mistaken for it. J. L. S.

We believe that, in leaving the matter of the *legality* of the resolution in the hands of the profession, we have assured them of the honorable intent of the Journal, and feel confident that gentlemen, in acting upon the question, will give it due consideration. Tedious discussion we deem unnecessary.

Dr. Charlton, of the Newcastle Infirmary (*Brit. Med. Journal*), has found creasote so uniformly successful in checking the vomiting which sometimes occurs in Bright's disease, that he has diagnosed this malady where other symptoms were absent, by the cessation of vomiting under that remedy. As another diagnostic sign he states that "tenderness on pressure of the pneumogastric in its course through the neck is evidence of inflammatory disease of some of the organs to which it is distributed, whether it be stomach, lung, spleen, liver, or kidney." If only one side be affected, the nerve on that side will alone be tender. —*Cincinnati Lancet and Observer.*

Medical Miscellany.

Rabies.—M. Peuch showed, at a meeting of the Society of Medical Sciences of Lyons, *Lyon Médicale*, Dec. 19th, 1869, the tongue of a dog which had died of the above disease. The owner of the animal thought that a bone had been arrested in the throat, as the dog was constantly carrying his feet to that region; but the veterinary surgeon at once suspected rabies. Let this circumstance be a hint to dog-owners. On each side of the tongue an ulcer with sharply-rounded edges was perceived, the size being from one to two lines. M. Peuch stated that he had never found such ulcers but in cases of rabies, and thought the latter disease had perhaps its own characteristic ulcer, like the syphilis or glanders. In answer to a question, the author said that he had inoculated the matter of each ulcer to a bitch two months old, and that, on killing the animal four months afterward, no rabid lesion was found, nor had any symptom been observed during life.—*Med. and Surg. Reporter.*

Effects of Godfrey's Cordial.—An inquest was held on Tuesday last, at Nottingham, on a child five months old, who, having suffered from diarrhœa, had "Godfrey's Cordial" administered to it by its mother. The child succumbed, and a post-mortem examination showed that death had been accelerated by opiates. A verdict in accordance was given, and the mother was reprimanded by the coroner, for her conduct in administering the "remedy."—*London Med. Times & Gazette.*

Carbolic Acid and Street Watering.—Dr. Whitmore, in his Report of the Health of St. Marylebone for August, says:—"During the summer most of our crowded streets have been watered on alternate days with a weak solution of carbolic acid, as has been the custom for the last four years, and there is no doubt that this excellent antiseptic and disinfectant has been very beneficial in a sanitary point of view. The inhabitants of those streets have often expressed satisfaction at the freshness and removal of disagreeable smells which this acid produces, and they regard it as an addition to their comfort."—*Ibid.*

A new Drug.—MM. Rabuteau and Peyre have been experimenting with the root of a plant in use at the Gaboon as an ordeal poison, and locally known as m'boundou or icaja. It will be remembered that it was from this source that the highly valuable calabar bean was obtained and utilized in medicine. The authors state that, even in very dilute decoctions, it is very bitter, and appears to contain one or more alkaloids, since the aqueous decoction is largely precipitated by iodide of potassium, and also by phospho-molybdic acid. The poisonous effects of this substance bear some similarity to the effects of brucia, but the authors state that, under certain conditions, this poison does not hurt men. Some of the lower animals are readily killed by it; a dose of three milligrammes of the alcoholic extract, placed under the skin of a frog, kills it; and rabbits and dogs are killed by doses of from fifteen to twenty-five centigrammes of the same extract introduced into the stomach.—*Brit. Med. Jour.*

Mr. Skey expresses very reasonable doubts of the injurious influence of atmospheric air in wounds. In the case of compound fractures, he attributes the slowness of the healing process, and other untoward symptoms, rather to the laceration and contusion of the structures than to the admission of air; adding that in operations for empyema and hydrothorax he has never made any attempt to exclude air, and quoting one case in which he and the late Dr. Todd intentionally admitted air enough to take the place of six pints of serous fluid, without the slightest evil result.—*Medical Gazette.*

Schwann's Discovery.—In 1837 Schwann discovered that meat highly heated and excluded from air never putrefied.—*N. Y. Med. Record.*

To Correspondents.—Communication accepted:—Naso-pharyngeal Polypi, removed through the Mouth by a modified Ecraseur.

Correction.—On page 203, line 29, for "Cooper, 26 days," read *Cooper*, 56 *days*.

Married,—In Gorham, Me., 29th ult., Dr. E. N. Whittier, of Boston, to Miss Nancy Pierce, of Gorham.

Deaths in eighteen Cities and Towns of Massachusetts for the week ending Oct. 1, 1870.

Cities and towns.	Total.	Prevalent Diseases			
		Cholera Infantum.	Consumption.	Dysentery and Diarrhœa.	Typhoid Fever.
Boston	128	13	20	7	4
Charlestown	14	3	3	0	0
Worcester	19	4	2	1	1
Lowell	19	1	5	1	2
Milford	6	1	1	0	0
Chelsea	6	1	0	0	0
Cambridge	13	3	1	1	0
Salem	6	1	3	0	0
Lawrence	13	2	4	1	0
Springfield	10	1	0	0	1
Lynn	14	2	2	0	3
Gloucester	11	1	2	1	0
Fitchburg	7	1	0	0	1
Taunton	5	0	1	0	0
Newburyport	9	1	0	2	0
Somerville	5	0	1	1	1
Fall River	12	2	2	2	0
Haverhill	3	0	1	1	0
	300	37	48	18	13

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Oct. 1st, 128. Males, 62; females, 66. Accident, 3—apoplexy, 1—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 4—inflammation of the brain, 1—bronchitis, 3—cancer, 1—canker, 1—cholera infantum, 13—consumption, 20—convulsions, 5—croup, 1—cyanosis, 1—debility, 4—diarrhœa, 7—diphtheria, 2—dropsy, 1—dropsy of the brain, 4—bilious fever, 1—scarlet fever, 1—typhoid fever, 4—disease of the heart, 3—hernia, 1—disease of the kidneys, 1—congestion of the lungs, 3—inflammation of the lungs, 6—marasmus, 6—old age, 4—paralysis, 2—peritonitis, 2—pleurisy, 1—premature birth, 2—malignant pustule, 1—rheumatism, 1—suicide, 2—syphilis, 1—unknown, 10—whooping cough, 1.

Under 5 years of age, 63—between 5 and 20 years, 7—between 20 and 40 years, 24—between 40 and 60 years, 17—above 60 years, 17. Born in the United States, 92—Ireland, 23—other places, 13.

THE

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NEW SERIES.] THURSDAY, OCTOBER 13, 1870. [VOL. VI.—No. 15.

Original Communications.

THE TENDENCY OF SO-CALLED LOCAL DISEASES TO GENERALIZATION.

By C. ELLIS, M.D., Jackson Professor of Clinical Medicine in Harvard University. Read before the Boston Society of Medical Sciences, June 9, 1870, and before the Boston Society for Medical Improvement, Sept. 15, 1870.

AT a meeting of the Medical Improvement Society on March 27th, 1865, a short paper was read by me upon the liability of various parts of the body to undergo structural change.[*] The title was objectionable, as it expressed an opinion, where the limited number of facts would only warrant a surmise, and appeared to express the convictions of the writer, whose only object in bringing forward the cases at the time was to call attention to what might, perhaps, prove, after further inquiry, an important fact, viz., the existence of structural or formative changes in diseases where none had previously been found; the participation of several organs in diseases supposed to be more or less strictly confined to one; or the danger that morbid action in one part may excite changes in others more or less remote. It was believed that with the new means of investigation furnished by modern science, various changes would be detected, not so obvious, perhaps, but quite as important as those previously described.

Further inquiry and subsequent experience have proved the correctness of these views. It has been found that medical literature can furnish many cases which show that the tendency of disease to generalization is much greater than was supposed.

Many of the instances cited to prove this are so old, so familiar to all, it is feared that the first objection will be that their introduction is entirely unnecessary. It is, of course, fully recognized that such facts are not new, that they have been, to a certain extent, properly interpreted, but it is also believed that their full significance has not been understood, in relation to the points we are about to discuss, and they are now brought together in this connection *to show that certain phenomena which had been regarded as isolated or exceptional are only manifestations of a general law.*

Another objection, which it may be well to anticipate at the outset, is the incompleteness or defective character of the evidence. This is inevitable, owing to the nature of the inquiry. No attention having been paid to the special points which interest us, in their bearing upon a general law, nothing, as far as is known, exists upon the subject, as a subject, and the materials have been drawn from various sources. Not having been contributed with any reference to our inquiry, there are omissions which weaken the testimony. But it may, perhaps, be questioned whether the possible error from this source is greater than that arising from the bias of a preconceived idea.

It must also be stated that only such parts of recorded cases or articles are introduced as have an immediate bearing upon the subject, but care has been taken to exclude the more questionable facts.

But, whatever the value of the evidence may be, it is only claimed that it is of such a character as to make it probable that the conclusions drawn may be correct. The absolute proof furnished by observations of the most rigorously scientific character must be derived from future inquiry.

In the article alluded to, several cases were cited; one that of a man who, in falling upon the sidewalk, struck upon a hard substance in his pocket. Dying a few days after, one kidney was found fractured; both organs were enlarged and softened, and the tubuli were crowded with epithelium, resulting from a process of growth. There was also double pneumonia.

As the man had previously been well, the order of events seems clear: first the fall and fracture of the kidney, and subsequently, as a consequence of the accident, the great multiplication of cell elements in the tubuli, and a similar increase of corpuscles in the air cells, constituting the essential lesion of pneumonia.

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[*] Boston Med. and Surg. Journal, vol. lxxii. p. 229.

In a second case, there was double pneumonia, with a similar affection of the kidneys.

On again opening the subject, I shall first cite cases of various kinds, solely with reference to the supposed law that *disease tends to generalize itself much more frequently than is usually believed.* The cases will be brought forward without regard to distinctions previously made, their physiological and pathological significance being afterwards examined.

Acute Pneumonia; Supervention of Inflammation of the Pia Mater; Supervention or Coëxistence of Renal Disease, and that of other Organs.—A very striking case of the above was noticed by the writer in his ward in the Massachusetts General Hospital in November, 1869.

A man, 30 years of age, entered soon after the commencement of an attack of pneumonia. There had been some transient delirium at the commencement, after over exertion, but this disappeared, and nothing of the kind was noticed until towards the close of the case.

He had served in the army during the years 1862, '63 and '64, and had been troubled more or less with chronic diarrhœa, and subject to attacks of "chills and fever" until 1866. The *urine* was examined soon after entrance, and found to contain a moderate quantity of albumen and some granular casts. The chlorides were diminished. He lived but ten days, during which time the physical signs showed that the inflammation had extended from the posterior part of the right lung and involved nearly the whole organ.

At the autopsy, nearly the whole *right lung* was found *hepatized;* the *pia mater* was everywhere more or less *infiltrated or covered with pus;* the *kidneys* were *softer, looser, more pulpy* than usual, and the microscope showed the *tubuli* to be *crowded with cell elements.*

Bennett, in his Clinical Medicine,* reports a case somewhat similar. A coal-heaver, 43 years old, entered the hospital with pneumonia, and died eight days after the commencement of the attack, cerebral symptoms having manifested themselves during the last twenty-four hours.

The autopsy showed marked *inflammation* of the *pia mater* and grey *hepatization* of the lower fourth of the right *lung.* The *spleen* was *soft* and *pulpy.* The *liver* weighed 6 lbs. 4 oz.; was *pale and soft.* As no microscopic or other accurate description of the last two organs is given, and as the patient was intemperate, we must remain in doubt about the precise nature of the changes, but they correspond in some respects with those which have been noticed in some other acute diseases.

In the same volume* there is reported the case of a man, 43 years old, who entered the hospital with pneumonia of the right lung, the duration of which could not be ascertained. On the evening of the second day he was attacked with acute meningitis, and died.

The autopsy showed universal cerebral *meningitis* and grey *hepatization* of the whole right lung.

Cerebral Disease followed by Pneumonia.—The following three cases show the converse, viz., the supervention of pneumonia upon cerebral disease. In one of them there were also symptoms of renal disorder.

Case I.—Bennett† reports the case of a patient who was suddenly attacked with paralysis of the face and left arm, on Nov. 5th. When she entered the hospital, on the 7th, the urine was slightly coagulable. On the 14th, there was diagnosticated pneumonia of two thirds of the left lung. On Dec. 11th every trace of pulmonary disease had disappeared, but the albumen had increased and fatty and waxy casts were found. On Jan. 1st there was no trace of paralysis of the face or arm; the urine was less coagulable by heat and no casts were seen. She was then discharged at her own request.

Remarks.—If we could know the condition of the kidney before the attack of paralysis, we should have an instance somewhat similar to that previously reported, where fracture of one kidney was followed by disease of both organs and hepatization of the lungs. We might reasonably infer that the injury to the brain, acting as a cause, was followed by pneumonia and a similar new formation of cell elements in the kidneys; and that, as the primary lesion improved, the other structural changes ceased and gave place to the normal action of the parts. Unfortunately, the patient left before the urine had become natural, but the marked improvement gives us reason for inferring that the change in the kidneys was connected with the other lesions, and that restoration was going on here as we saw it completed in the lungs.

Case II.‡—A patient, 53 years old, was attacked, on Jan. 1st, with paralysis of the left side. When she entered the hospital, on the 10th, signs of pneumonia were detected, and she died on the 12th.

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* P. 317.

* P. 638.

† Clinical Medicine, p. 360.

‡ Ibid, p. 362.

The autopsy showed effusion of blood into the right hemisphere, hepatization of the lower half of the lower right lobe and some purulent-looking formations.

Case III.*—A woman, 59 years old, was suddenly struck down by an effusion of blood into the left corpus striatum. She entered the hospital on the day of the attack. Three days after, she was seized with pneumonia, which terminated fatally in two days.

Autopsy.—In addition to the extravasation of blood into the left corpus striatum, there was hepatization of the two lower lobes of the right lung.

In connection with this case, Bennett remarks that pneumonia is one of the most common sequelæ of severe lesions at the base of the brain.

It has been noticed that the kidneys have been involved in some of the cases grouped together to illustrate other more striking connections, and it is probable that these organs are affected much more frequently than is generally suspected. While following the course on Pathological Anatomy, given by Prof. Virchow in Berlin in 1870, the examples of this were quite striking, and a number may be cited here.

Lesions of Kidneys and other Organs.—1. The *lungs* of a boy were shown, affected with *pneumonia.* The *kidneys* were also *enlarged* and in that condition which indicates the multiplication of the cell elements in the tubuli. The *spleen* also showed similar changes.

2. In another case of *pneumonia*, the *kidneys* were also *enlarged* and *opaque*, as in the above.

3. In another rare variety of *pneumonia*, the interstitial, resembling that seen in cattle, there was severe *pleurisy* and the *kidneys* were affected in the manner already described. The *liver* and *spleen* were also *enlarged* by recent disease.

Mr. E. S. Wood, a member of the present medical class, during his residence at the Chelsea Marine Hospital, examined the *kidneys* in a large number of cases of *typhoid fever*, and found the change described by Virchow as a proliferation of the cell-elements, sufficient to fill or distend the tubuli.

It may be well, in this connection, to allude to the frequency of renal disease in scarlet fever, although this and the preceding instances differ from those previously cited, inasmuch as they are regarded as general diseases. While we reserve the discussion of this point for future consideration, there can be no question of the propriety of retaining both instances as examples of the liability of the kidneys to be attacked. Let the question at present be one of fact, not cause.

The Influence of the Uterus in exciting Structural Disease elsewhere.

We now come to a very interesting class of cases—those in which various changes of the uterine tissue exert a marked influence upon the condition of other organs.

Effect of Pregnancy upon the Kidneys.—Let us first allude to the well-known effect of pregnancy in exciting disease of the kidneys. Blot states that albuminuria occurs as often as in one case in five. Dr. Elliot, in his Obstetric Clinic, states that out of 437 pregnant women albumen was found in 23; but, as in 3 it was probably connected with pus, the proper number is 20. Other evidences of disease were also found, such as casts, &c. The conditions of the organs examined were those described under the heads of desquamative nephritis, proliferation of the elements, parenchymatous swelling, &c.

He considers pregnancy as "the special excitor in very many cases of albuminuria which had not previously existed," and also "as materially developing those morbid conditions in many chronic cases, in which they might possibly have remained latent for a much longer period; or in which they might have disappeared without such excitation, thus offering an inevitable increase of risk, analogous to those which we seek to avoid when albuminuria is uncomplicated with this state."

Roberts* states that "albuminuria is not usual before the seventh or eighth month, and even not until the approach of labor; though sometimes it may appear as early as the third month. It increases up to the time of delivery, and then rapidly passes away, so that it may disappear in forty-eight, or even in twenty-four hours, but it may persist for ten or fifteen days. If found after this period, there is reason to fear that chronic renal disease will follow."

If the above statements be correct, they show very clearly that pregnancy has a marked influence upon the development of cells in the kidneys, and that the latter process ceases after the new functions of the uterus are ended.

After seeing these changes produced by a simple physiological process, it becomes most interesting to observe the action of severe *disease* of the uterus in exciting not only this change, but similar modifications of other organs.

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* Bennett, p. 361.

* Urinary and Renal Diseases, London, 1865, p. 287.

Effect of Diseases of the Uterus upon other Organs. Virchow's pathological course again furnishes very important facts in this connection. Specimens from two cases were shown at the same time, in one of which the *inflammation of the uterus*, in a puerperal case, was limited in extent and attended by but slight change in the *liver*, *spleen* and *kidneys*.

In a second case, where *inflammation* was extensive and severe, those organs were all considerably enlarged by parenchymatous disease, in which the elements were swollen and changed in their microscopic characters.

In another case of *puerperal diphtheria* of the *uterus* and *vagina*, there was no evidence of embolism, but the *liver*, *spleen* and *kidneys* showed advanced parenchymatous disease.

A still more striking instance was afforded by a case in which a *diphtheritic process of the uterus*, extending to the skin outside of the vagina, was followed by *acute swelling* (whitish opacity) of the *liver*, "very fine *acute swelling* of the *kidneys*," hæmorrhagic *pyelitis*; *inflammation* of the *bladder*; *acute pneumonia*, not of the character of that seen in pyæmia: and a *softened spleen*. There was no pus, no inflammation of the lymphatics, nor phlebitis, nor any other sign of pyæmia.

In a case of *oophoritis*, *perimetritis* and *inflammation* of the placental portion of the *uterus*, the *liver*, *spleen* and *kidneys* were *swollen* by the same acute process.

In another case, where the puerperal process was more chronic, similar changes were noticed in the *kidneys*, *spleen* and *liver*; and there were, in addition, *pleurisy*, *pyæmic* formations in the *lungs*, and secondary *diphtheria* of the *larynx*.

Prof. Rud. Maier, of Freiburg, has published an article[*] upon this subject, in which he states that in the various forms of inflammation of the uterus in the puerperal state, there was almost always some affection of the heart, liver or kidneys, and, in most cases, all three organs were affected.

The appearances were such as are described by Buhl and Hecker.[†] They indicated fatty degeneration, which appeared to have been preceded by an acute inflammatory condition, were most marked in the kidneys, but also seen in the heart. Although the changes differ in different organs, the writer considers that they all had the character of acute degenerative processes. As this general statement is sufficient for our purpose, the details have not been given.

Let us now, while these cases are fresh in our minds, endeavor to comprehend their true significance. We appear to have a real sequence in which the physiological blends with the pathological. Throwing aside all preconceived ideas, and beginning with the changes produced by conception, we see marked changes in the nutrition of the body as a whole and in many particular parts. We have the enlargement of the uterus itself; a marked modification of the vagina; the symphisis pubis is loosened by a decided change in the uniting tissues; the breasts enlarge and finally secrete milk, which implies a new formation of cells; the color of the areolæ changes by the formation of pigment, and the latter makes its appearance at other points, in lines or patches, which show a new action on the part of preëxisting cells.

These variations we properly call physiological, but in a certain number of cases the formative change extends beyond the proper physiological limits and involves the kidneys; the multiplication of elements within the tubuli interferes with the functions of the parts whose healthy action is essential for the integrity of the body, and in this way may prove fatal, although similar in character to that previously mentioned. In still more striking cases, the uterus is attacked by inflammation after the birth of the child; its influence radiates still more widely, and many organs may be affected. The modifications of nutrition are so marked and extensive that life is no longer possible, and yet if we compare these changes with those already described, we shall find that they resemble each other very closely in their minute anatomical characteristics.

Effect of Disease of the Kidneys upon other Organs.—The kidneys have been seen to suffer very frequently in connection with diseases of other parts. Conversely, we have the most abundant evidence to show that all parts suffer from disease of the kidneys. The fact that these abnormal conditions may be explained by the retention of injurious materials is of no consequence now, as we are still dealing with facts, not causes. Beale states very clearly that "in chronic cases of renal disease there is scarcely an organ in the body which retains its healthy state, and of the persons, whose deaths are registered as resulting from pneumonia, bronchitis, dropsy, convulsions, various forms of disease of the nervous system and other conditions, not a few are really caused by renal disease, and the special disease is but a consequence of the primary changes in the kidney." He considers that many of these changes progress slowly, and, though a whole organ may be affected to a certain extent, the elements may still possess the power of limited action. Though no complete lesion may be found in the great nervous centres by an ordinary examination, the changes here are so difficult to detect or appreciate, that we must be exceedingly cautious in pronouncing the parts healthy. The variations are of such a character that they cannot be detected by a superficial examination, and often not by the closest scrutiny with the naked eye. But the microscope has already revealed so much, we may hope for large additions to our knowledge, in this respect, in the future.

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[*] Virchow's Archiv für Pathologischen Anatomie, vol. xxix. p. 526.

[†] Ibid., p. 552.

One of the most common ascertained changes is that of the retina, which takes place in many chronic diseases of the kidney, though it may be too slight to attract the attention of the patient. It may progress, however, until it amounts to complete blindness. Its essential character is a fatty degeneration of the bloodvessels or nerves, which may be noticed during life. Its course is generally slow, but sometimes sight is lost in a few weeks.

Though so well known, I will introduce here, as of great value in our inquiry, the other changes so often seen. More or less *bronchitis* almost always exists. *Pleurisy* and *peritonitis* are not infrequent. *Pericarditis*, though comparatively rare, is the most surely fatal of the inflammatory affections. *Pneumonia* is more common; it breaks out without appreciable exciting cause and terminates fatally. The universal anasarca, though not regarded as a lesion of nutrition, seems much more easily explicable as such, than in any other way.

The Effect of Disease or Injury of External Parts in exciting Changes in the External Organs.—The series of cases showing this is quite striking.

Erysipelas as an Excitor of Internal Disease.—Beale[*] reports a case in which *erysipelas* attacked a patient four days after an operation for strangulated hernia, and lasted three days. The day after the disappearance of the erysipelas, the *urine*, which had previously been healthy, was found to contain *albumen*, *casts* and *blood corpuscles*. Nineteen days after, the patient died, the suppression of urine having been nearly complete during the last three days.

The *kidneys* were much *enlarged*, one weighing fifteen, the other thirteen ounces, the increased weight being attributable to an accumulation of large cells like white corpuscles in the capillary vessels, and of casts and cells like pus corpuscles in the tubes.

Bennett[*] reports the case of a patient, who was attacked with *erysipelas* of the face on December 5th. On the 7th, the *urine* was found to contain a considerable quantity of *albumen*; on the 11th, symptoms of *pneumonia* showed themselves, and were followed by complete hepatization; on the 24th, the patient was nearly well. An examination of the urine on the 13th, proved that the albumen had disappeared.

If we regard the appearance and disappearance of the albumen as the expression of the condition of the kidneys, we must conclude that the erysipelas produced a marked effect upon those organs, while they were not influenced by the pneumonia, as the albumen disappeared while the pulmonary disease was progressing.

M. Sabbé,[†] after reporting a case of *erysipelas*, which extended to the mouth, throat and lungs by continuity, adds that there exists a form of erysipèle ambulant, which invades the most remote parts of the body without passing by intermediate surfaces.

Frank[‡] states that a rose or even a scarlet color of the minenges pleura or peritoneum is often found in cases of erysipelas, and that a serous or puriform fluid collects in the neighboring cavities. He then makes a still stronger statement that he has hardly ever made the autopsy of a patient dying with erysipelas, without finding some interior lesion, such as abscess of the ears, caries of the mastoid cells, or of the maxillary or frontal bone.

Hebra, in his work on Diseases of the Skin, says that, as an immediate cause of death after erysipelas, we have hyperæmia or œdema of the brain or meninges; pneumonia; pleurisy; pericarditis; peritonitis and enteritis.

These general statements, in connection with the single cases reported, leave no reasonable doubt that the disease merits a place among those which show a disposition to generalize themselves.

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[*] Page 18.

[*] Clinical Medicine, p. 632.

[†] Bulletin de la Société Anatomique, 1858, p. 60.

[‡] Pathologie Interne, vol. ii. p. 74.

Effect of Burns upon the Internal Organs.—The above being true, we should be ready to believe that burns might be followed by similar results.

Ericsen[*] states, from the second day to the second week after a burn we have affections of the internal organs, particularly of the abdominal and thoracic viscera. Death is caused by some inflammation of the gastro-intestinal mucous membrane, with, perhaps, the addition of that of the peritoneum. We may also have pneumonia or bronchitis. The most unequivocal signs of inflammation of the brain may also show themselves in the form of congestion or serous exudation. Perforating ulcer of the duodenum is especially apt to occur, usually on the tenth day after the burn, seldom earlier. One case, however, is mentioned, where a child nine years of age died on the fourth day after a burn, in whose duodenum was an ulcer as large as a shilling, the intestinal mucous membrane being at the same time generally inflamed.

The Influence of Severe Wounds in causing Internal Changes.—Dr. Waldeyer, of Breslau,[†] has published an article in which he includes the appearances under four principal heads.

1. Embolism. 2. Ichorrhæmia, in which there is diffused suppuration of an acute character without any necessary putrefaction. 3. Septicæmia, in which putrefying substances make their way into the blood. 4. Traumatic phthisis or consumption. He met with hardly a single case in which one alone of these appearances was noticed.

We are particularly interested in those changes included under the head of ichorrhæmia or septicæmia, or with many of the appearances generally mentioned under the head of pyæmia, such as suppuration of the joints, inflammation of the serous cavities, which, our author states, are not cleared up by the ordinary explanations. He reports a case where a patient died four weeks after a wound in the foot, with sero-purulent effusions into the subarachnoid spaces of the cerebellum. No connection between the two could be shown, and the author considers the explanation so difficult as to admit that he should be inclined to regard the meningitis as an accidental complication, if such affections of the brain had not been frequently mentioned in connection with pyæmia.

The most constant changes noticed in the bodies of those who had died from wounds were seen in the lymphatic apparatus of the intestines and mesentery, both by the naked eye and with the microscope. The appearances were those of hyperplasia and fatty degeneration. Swelling of the lymphatic follicles of the intestines and diarrhœa were common. The cortical substance of the kidneys was affected with almost as great frequency as the lymphatic apparatus of the intestines. The most frequent change was a more or less considerable swelling, with marked opacity and moderate fatty change of the convoluted canals. This was seen in nearly 80 per cent. of the cases.

Much more rarely we have simple opacity with swelling; simple hyperæmia or a normal appearance. The highest degree of swelling and opacity was seen in cases of ichorrhæmia in which other organs were affected. The organs varied in *consistence*, being sometimes very soft, sometimes dense and firm. Both were changed in the same way, the difference being at most a quantitative one. *Normal kidneys with marked changes in other viscera were not found.*

Changes in the *spleen* were by no means constant, although fever and rigors were common. It was found perfectly normal in eleven out of sixty cases, even when there were changes in the liver, kidneys and lungs. The lesions when seen were: 1. Considerable swelling of the organ, which had a soft, pulpy consistence; 2. Dense, firm hyperplasia; 3. Great hyperplasia of the Malphigian corpuscles; 4. Abscesses.

The *liver* presented the following characters: 1. It was completely normal; 2. There was simple swelling; 3. Simple fatty infiltration in the course of the portal vein; 4. Granular fatty and degenerative opacity; 5. Enlargement by stagnation of bile, either with or without degenerative changes; 6. Abscesses.

The mucous membrane of the pyloric portion of the stomach was often considerably swollen and opaque. This was prolonged into the duodenum and upper part of the jejunum. In the duodenum, Brunner's glands projected as yellowish, opaque masses of the size of a lentil. All the coats of the stomach and intestines were succulent and not unfrequently œdematous. He once saw a diphtheritic process in the large intestine.

Caries of the Temporal Bone and Inflammation of the Pia Mater.—The cases of inflammation of the pia mater, which, at times, supervene so suddenly upon caries of the temporal bone, when no connection can be shown between the two, may, perhaps, belong to this category.

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[*] Science and Art of Surgery, 2d ed., p. 333.

[†] Virchow's Archiv für Pathologischen Anatomie, vol. xl. p. 379.

Inflammation of the Bladder and Kidneys.—In a number of autopsies made at the Massachusetts General Hospital, the kidneys were found to be the seat of acute inflammation, which was, apparently, the immediate cause of death, though the patients had suffered for a long time with disease of the bladder.

In most cases of the kind, the dilatation and thickening of the ureters and of the pelvis of the kidneys indicated long-continued obstruction to the escape of the urine, but occasionally these changes were wanting and no extension of inflammation from the bladder could be detected.

After the consideration of these groups of cases, it may be well to introduce some which, though isolated, appear to illustrate the same point.

Pneumonia, Pleurisy, Pericarditis and Peritonitis.—In 1855, a man, 80 years old, entered the Massachusetts General Hospital, and died the day after entrance. He was too feeble to give any definite account of himself, but it was ascertained that he had given up work three weeks before entrance, on account of increased weakness, cough, and pain in the right side, which afterwards extended to the left. There was some looseness of the bowels, with abdominal pain.

The autopsy showed *pneumonia, pleurisy, pericarditis* and *peritonitis.*

The absence of any satisfactory history of the case makes it impossible to be certain of the sequence of these changes, but there was evidently something more than extension by continuity.

Bennett* reports a case of acute *peritonitis* caused by the bursting of a Graafian vesicle. The patient died in about twelve days.

In addition to the *peritonitis*, the entire surface of each *pleura* was covered with dirty, greenish *fibrin*. The lower third of the right *lung* was marbled by interlobular *inflammation ;* the liver was of a brick-red color, and decidedly softer than usual ; the spleen of a pulpy consistence, breaking down under the slightest pressure ; and the kidneys were somewhat softened.

In the remarks upon the case we are told that the cause of the disease extending to the right pleura and interlobular spaces could not be discovered.

Inflammation of the Submucous Cellular Tissue of the Stomach. Croup. Acute Disease of the Liver, Spleen and Kidneys.—A stomach was shown by Prof. Virchow, in Berlin, in which the submucous cellular tissue of the stomach was found infiltrated with pus at certain points. The larynx was affected with croup ; there was "parenchymatous swelling" of the kidneys ; enlargement of the spleen by an increase of its pulp ; and enlargement of the liver.

Having thus shown by numerous examples that disease may propagate itself in a large number of cases where this tendency has been overlooked, that one organ after another may be involved, or that several may be attacked at the same time, it is very important that we should understand, if possible, how this extension may take place.

We have already sufficient positive knowledge of morbid processes to regard some points as settled and others as probable, but there still remains much which only affords matter for conjecture.

1. We have the transportation of visible materials through the bloodvessels in the form of *emboli.* I shall only allude to this, as the researches of Virchow and others have removed the subject beyond dispute.

We may also cite, as allied to this, the accumulation of white corpuscles in the capillaries and extravasations of the same in various organs as described by Ranvier* in connection with leucocythæmia, where an immense number of white corpuscles are supposed to be formed in the lymphatic glands and transported to all parts of the body.

2. The transportation of visible materials through the lymphatic canals, as in tattooing, though the coloring matter is here arrested in the first lymphatic gland.

The staining of the bones of animals fed on madder may belong to this class, or the coloring matter may perhaps pass through the bloodvessels.

3. The transportation of invisible, soluble, but distinctly recognizable materials through the vascular or lymphatic system. As instances of this we have the staining of various distant parts by nitrate of silver taken into the stomach, or the effects of poisonous materials, whether introduced from without or originating in the failure of some organ to perform its proper functions, particularly the kidneys.

4. The appearance, in various parts of the body, of similar or allied diseases in cases where no special matter for propagation has been proved to exist, and in which, perhaps, no satisfactory route for its transmission has been found, unless it be through the tissues themselves.

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* Clin. Medicine, p. 499.

* Archives de Physiologie Normale et Pathologique, 1869, p. 408.

5. More or less complete generalization or multiplication through the action of the nervous system.

The *fourth* and *fifth* varieties are the only ones which have a bearing upon our inquiry. That nutritious canals exist in the connective tissue which extends throughout the body has been shown by Virchow and others; and admitting this fact we can understand how certain forms of disease may generalize themselves, but we must not forget that in most of the instances cited in this article no *materies morbi* has ever been found possessed of the properties which favor transmission. How are we to explain the generalization in such cases? Let us examine the evidence, commencing with that large class of cases included under the head of purulent infection or ichorrhæmia, in which the presence of some contaminating fluid or material has been suspected, although such has not been demonstrated.

As the lesions peculiar to this condition are so often found in connection with embolism, the question may arise whether ichorrhæmia without the embolic process causes local inflammation and abscesses.[*] In regard to this there is a difference of opinion. If we regard embolism as mechanical and ichorrhæmia as chemical, we must remember that the bad effect of emboli may be partly owing to their softening, and they may then act chemically. We have in every wound, however inconsiderable, the possibility of ichorrhæmic infection and embolism, the danger commencing whenever the suppuration showed a disposition to spread extensively.[†]

The *locality* of wounds appeared to have some influence upon the production of ichorrhæmia and of embolic abscesses.[‡] Wounds of the head, especially of the scalp, even when the bone was not affected, and those of the upper and lower extremities, were liable to be followed by these accidents; while wounds of the trunk, face and viscera, even if their course was much more protracted, were attended by much less danger in this respect.

The anatomy of the parts seems to explain this, as in the head and extremities there are more continuous portions of connective tissue, through which inflammation can spread more easily. We have the same condition in the uterus and broad ligaments, the amount of loose connective tissue being as great here as in any part of the body. Other authors are referred to who speak of the same points.[*] Bearing these facts in mind, we can easily understand that rapid and diffuse extension of suppuration is very dangerous, and likely to be followed by general disease.

Granulating surfaces, on the contrary, offer a complete protection against the infectious process. This is shown very strongly in old, offensive ulcers.

Prof. Waldeyer does not think that the cause of the wide-spread inflammatory troubles is a specific poison, and considers that, although embolic masses may pass through the lungs and explain the abscesses in the spleen, liver, kidneys, &c., the *diffused suppurative processes* of the serous membranes, meninges and joints *are unexplained.*

However much we may be inclined to agree with him, no poisonous matter having been demonstrated, we could hardly consider the reason for his belief sufficient, viz., that the appearances vary so much, while the manifestations in other specific processes are the same everywhere.

But, however this may be, we certainly have not learned what *ichor* is. Neither do the researches of Virchow, profound as they are, throw any more light upon the exact nature of this supposed agent. He describes ichorrhæmia[†] as "that inclination to the production of metastatic collections of inflammatory, diphtheritic, erysipelatous, purulent processes which I have elsewhere called the purulent disposition. Still, it appears to me that it is characterized less by circumscribed lobular formations than by those of a diffused character, as in metastatic arachnitis, meningitis or diffused infiltration of the subcutaneous or intermuscular cellular tissue; acute metastatic affections of the joints or of the serous membranes; the parenchymatous inflammation of the great abdominal organs; the diphtheritic and croupal inflammation of the intestines, air-passages, parotids, &c. These affections have everywhere a great inclination to extension."

Billroth, in the Archiv für Clinische Chirurgie, describes one variety of disease, in which the metastatic formations are demonstrable in a mechanical way by emboli, and another in which no emboli can be demonstrated, but in which there is a *diffused purulent inflammation in the lungs, liver and joints, which appears to arise spontaneously.*

We see that the term *ichor* is applied to a supposed morbific agent, of which we know absolutely nothing. It has been very generally accepted, as if something of the kind were necessary to explain certain phenomena; but if we look at the question in all its aspects, such a supposition seems to be unwarranted. We know that the most striking formative changes may be produced without the agency of any such matter.

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[*] Archiv für Pathologischen Anatomie, vol. xl. p. 411.

[†] Ibid., p. 411.

[‡] Ibid., p. 413.

[*] Archiv für Path. Anat., vol. xl. p. 416.

[†] Ibid., p. 398.

Pneumonia has never been supposed to furnish a poison which could contaminate the rest of the body, and yet we have sufficient proof that it is frequently accompanied by affections of other parts.

Pregnancy has no poisonous influence, and yet we need but the contact of the impregnated ovum with the inner surface of the uterus to originate a series of structural physiological modifications of many portions of the body. To these, pathological changes in the kidneys are sometimes added. The latter is attributed to congestion, caused by pressure upon the bloodvessels, by many writers, and among them Beale, who admits, however, that such changes may be brought about by disease of the blood, or the influence of the nerves, such as prolonged excessive violent nervous exertion, particularly in close, hot rooms, with a very imperfect supply of air. With the absence of this lesion in so many cases of pregnancy where there must be congestion, with its presence under the conditions enumerated by him, and with its appearance in connection with so many different diseases, we should certainly not be justified in concluding that pressure upon the bloodvessels alone, and consequent congestion, is the only cause in pregnancy, where so many other modifications of organs and tissues take place. We have, as a lesion, the multiplication of cells, and we see this occur under a great variety of influences, one of which is simple exposure to cold. This process of multiplication interferes with the usual function of the cells, replacing it, as it were, just as in embryonic life, when the process of growth is so rapid there is but little secretion of any kind.

Beale also states that the same suspension of function is seen in the sweat glands, in the tubular glands of the uterus and in the testicle, where these parts are enlarged by a great development of cell elements.

In the cases of cerebral disease followed by pneumonia, and in burns, we certainly cannot suppose the action of a special *materies morbi*.

If erysipelas, typhoid and scarlet fever be cited, specific contagious principles are at once and very properly offered in explanation, and the multitude of lesions is supposed to indicate a general disease. A sufficient objection to the latter term is that it explains nothing, but merely expresses this generalization in another way. It is only an unconscious announcement of our ignorance of the real nature of the process. But, admitting its action in its widest conceived sense as a something seizing upon the blood or tissues, and manifesting itself at many points, we must certainly enlarge its meaning, and give it wider scope, for we have seen that many diseases, strictly local, perhaps accidental, and, therefore necessarily local, may be followed by the most general manifestations. Unless the latter are the result of a simple diminution of vitality of the whole body, which allows the latent morbid tendencies of individual parts to show themselves, we should be obliged to maintain either that a local disease had first excited a general condition, which had then manifested itself as such usually do by disseminated lesions, or we must admit that the secondary phenomena were legitimate consequences of the primary. To insist upon the first view would be only to insert between processes often clearly connected a supposititious agent, a mere name and nothing more.

But some of the strongest proofs of this disposition to generalization are furnished by manifestations so common that their real import has been overlooked. It is many centuries since the tongue attracted attention as an exponent of disease elsewhere. Nothing could be more minute than the descriptions of its changes as connected with the modification of parts more or less remote, but it seems never to have been suspected that it was one of the most obvious expressions of a general law, which regulates the relations of the various parts of the body.

The common occurrence of a sudden transfer of the inflammation in mumps from the parotid gland to the testicle is only another manifestation of the same law, but no ichor or morbific agent has ever been discovered.

In gonorrhœa, where the inflammation of the urethra is caused by matter which cannot properly be called specific, like that of syphilis, the joints may be affected as in rheumatism. When we consider the morbid processes excited in various parts of the body by exposure to cold, we shall not be inclined to regard as at all remarkable the cases cited in the first part of the paper. An impression made upon the outer surface in this way is followed in one person by coryza, in another by bronchitis, in a third by pneumonia, in another by some abdominal disease, or by general articular rheumatism. The cold produces a certain impression, like innumerable other agents, and the parts respond according to their susceptibilities or proclivities. Why such marked results should follow from so slight a cause, at times when much more powerful influences are resisted, we cannot say. Sometimes the exposure is so slight as to be hardly or not at all noticed, and yet the gravest consequences follow: while at other times the resistance of the body is almost beyond belief. The seeming contradiction is, however, no greater here than in other cases, where there is the same want of correspondence between the initial structural change and the consequences which follow it.

Dr. J. Ross* quotes Dr. Bennett as speaking of pleurisy, pneumonia and bronchitis, after the sudden exposure of the chest to a draft of cold air, and adds that all the cases show that *inflammations pass from one part of the body to another without more direct anatomical connection than exists between the surface of the body and the internal organs.*

But if diseased action may be in this way excited, it may when already existing be also influenced beneficially by the external application of various means, such as cold, heat, galvanism, &c. Certainly no material agent is active here.

In the absence of this in so many cases, where nothing but an immaterial cause of disease can be detected, it seems absolutely necessary to admit the agency of the nervous system. It is not necessary to cite instances of the well known influence of the mind upon the functions of the body, whether for good or evil. Impressions upon the special senses furnish many instances of the same kind.

Changes in one part of the nervous system may be followed by striking modifications of distant portions of the same. This is shown by the numerous reflex phenomena which have become a part of classical medicine. Dr. Brown-Séquard has shown that section of the sciatic nerve may produce such a change in distant parts of the nervous system, as to make an epileptic fit possible, on pinching the skin of the neck, though such a stimulus would previously have no effect of the kind.

But as our intention has been to show the more or less extensive *generalization of structural changes*, and explain, if possible, their connection, it is necessary to show that they may correspond with the distribution of nervous branches, or may be immediately connected with injury or disease of the nervous centres or particular nerves. Of this there is abundant evidence. Damon† states that "in many cases herpes labialis is sympathetic in its origin. The same may be said of zoster. Cold gives rise to both of these varieties of herpes; so also do affections of the internal organs." After quoting several authors, he adds:† "From a careful study of these writers, together with our own observations of numerous cases, we feel assured that herpes zoster, phlyctenoides, labialis and præputialis, are only local varieties of a vesicular eruption, which is distributed upon the *trunks* and *terminal filaments of the different cutaneous nerves.*"

Dr. R. T. Edes‡ states that "herpes is a disease which is quite generally considered to be a neurosis, especially when occurring in the form of zoster.

"Its frequent connection with neuralgia, its following the course and distribution of nerve trunks, and its usual (though not invariable) unilateral occurrence, are the symptoms which give to it this character. Zoster, like a multitude of other diseases, is said to be caused by sudden emotion, especially anger. Charcot§ reports two cases of herpes, one in the course of a sciatic neuralgia, the other accompanying a traumatic neuralgia, which followed a gunshot wound. Brown-Séquard‖ also reports a case where herpes occurred after cicatrization of a gun-shot wound, in a place deprived of sensibility."

Dr. Edes¶ again says that "*lesions of nutrition, as a consequence of irritation, are,* however, if the explanations heretofore adopted in this essay are correct, *much more varied than those following paralysis.*" He cites cases of unilateral atrophy of the face, probably caused by lesions of nerves, and shows how the opposite condition, hypertrophy, may accompany or succeed disease of the sympathetic** in exophthalmic goitre. He also quotes cases cited by Paget.†† In the first, after injury to the median and other nerves, with adhesion to adjacent tissues and induration of both it and them, the patient had constant pain, impairment of touch, contraction of fingers and constantly repeated ulcerations at the back of the hand. In the second case, a man was at Guy's Hospital, whose median nerve was compressed by excessive formation of bone after a fracture. Ulcerations on thumb, fore and middle fingers could be cured only by so binding the wrist that, the parts on the palmar aspect being relaxed, the pressure on the nerve was removed. So long as this was done, the ulcers became and remained well; but as soon as the man was allowed to use his hand, the pressure on the nerves was renewed, and the ulceration of the parts supplied by them returned.

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* Practitioner, vol. ii. p. 78.

* Neuroses of the Skin, p. 61. † P. 70.

‡ The Physiology and Pathology of the Sympathetic or Ganglionic Nervous System, p. 111.

§ Journal de la Physiologie, vol. ii. p. 108.

‖ Ibid, note. ¶ P. 121. ** P. 132.

†† Surgical Pathology, Am. Ed., 1860, p. 12.

Two cases are also quoted by Romberg,* in which lesions of nutrition were observed in the eye and gums, caused by disease of the origins of the trigeminus and Gasserian ganglion.

Many other cases of a similar character are recorded, but we have cited a sufficient number to show that impressions made upon the nervous system may be followed by structural changes in the tissues supplied by the nerves involved.

Admitting this, it seems reasonable to suppose that *disease of some internal part* may, in the same way, produce such an impression upon the sympathetic or cerebrospinal system that distant parts may respond. It is only an *impression*, a *force*, we need; whether grief, cold, heat or inflammation, is of no consequence. The exciting causes may be either external or internal, and almost infinite in number, although the anatomical changes with which nature expresses herself in what we call disease may be limited. If a chill may cause sore throat or pneumonia, they in turn may give rise to chills. In other words, external cold may cause a metamorphosis of tissue, and a similar metamorphosis commencing within may excite correlatively the phenomena of heat, cold, &c.

We must, therefore, remember that morbific causes, when judged by their effects, may be *analogous* but not *identical*.

While recognizing fully the difficulty and intricacy of the problem before us, we seem justified in believing in the existence of such a unity or solidarity in the body as to render possible the generalization of diseases which have been regarded as essentially local, the liability to this varying as much as in impressions produced by external causes.

ON VISCERAL NEURALGIA AND ANGINA PECTORIS.

Prof. Eulenburg, of Berlin, has made a special study of neuralgia of the visceral organs, including angina pectoris. This latter disorder, he considers, can occur as a symptom of various diseases of the heart, and it seems especially associated with ossification of the coronary arteries. Cases, however, do occur in which there are lesions of those arteries without the angina pectoris, and, on the other hand, in which there is the pain without the lesion.

All the nerves which are associated with the heart have been in turn considered the seat of this disease. M. Eulenburg agrees with those who do not think it a simple hyperæsthesia of the cardiac plexus, but give to certain motor nerves of the heart a participation in the change. We cannot, however, as yet distinguish the individual nerves which are implicated, or the functional changes which produce the attacks. Notwithstanding the progress in the study of the nerves of the heart in the last ten years, it is still impossible, with the complexity of the phenomena with which we have to deal, to find one general and absolute explanation of the symptoms. We must necessarily content ourselves with a physiological analysis of the symptoms, and demonstrate experimentally how far each group of nerves is involved.

The pain of angina pectoris seems to be traced to the cardiac plexus of nerves. The heart appears, indeed, in the healthy state, to be destitute of sensation; but in diseased conditions might it not be the seat of pains analogous with those of gastralgia, colic and the like? In mammals the heart receives sensitive nerves which do not originate in the pneumogastric, since, after section of both vagi, the animal shows signs of pain when the auricles are irritated; it may be, therefore, that the distress is due to fibres from the sympathetic, for it resembles that produced by the irritation of certain sympathetic nerves in the viscera as in gastralgia.

This neuralgia of the cardiac nerves is easily explained where there is mechanical irritation from some organic affection, like ossification of the coronary arteries or valvular lesions of the aorta. But where there is no such condition, the explanation is still wanting; and, moreover, it fails to explain the paroxysmal character of the attacks.

The radiation of the pain toward the extremities is accounted for by the anastomoses existing between the cardiac nerves and the cervical ganglia on the one hand, and the roots of the cervical nerves and the branches of the brachial plexus on the other.

The pain in the course of the cervical

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* R. T. Edes. Physiology and Pathology of Sympathetic System, p. 130.

plexus is due to the connection between the cardiac plexus and the anterior branches of the last four cervical and the first dorsal nerves. The pain in the left arm is traced to the connection between the anterior branch of the first dorsal nerve and the inferior trunk of the brachial plexus. The pain is more frequent in the left side, either on account of the position of the heart and aorta on that side, or because the anastomoses are more intimate there. The superficial pain in the front of the chest is due to the communication of the brachial plexus with the thoracic nerves, and that in the region of the diaphragm to the anastomosis of the phrenic with the fourth and fifth cervical and with the cardiac nerves. The dysphagia, nausea and impaired phonation may be traced to the connection between the par vagum and the sympathetic.

Except the pain, the most important symptom pertains to the impaired action of the heart during the attack. But it can be shown that the phenomena can have their origin in different groups of nerves. The heart contains ganglia which constitute an automatic system, and conditions which paralyze these cause an arrest of the heart's movements.

Thus Landois has demonstrated that the automatic action of the ganglia is impaired in two ways—the function is either stimulated or much depressed. Weak solutions of certain poisons irritate the ganglionic cells and stimulate the action of the heart; concentrated solutions immediately paralyze the ganglia and arrest the heart's movements. In certain diseased states of the heart, the cardiac ganglia may be affected in various ways. Under the influence of certain lesions of the vessels, or of the parenchyma, which modify the distribution of blood to the ganglia, or by such changes in the muscular tissue as myocarditis and fatty degeneration, it is possible that the heart may be affected in both directions; in one case, the stimulated ganglia hasten the movements; in the other, the action of the heart is paralyzed by a too powerful stimulus.

The two phenomena may manifest themselves alternately during an attack of angina pectoris.

Other physiological facts favor this theory that the cardiac ganglia may be influenced in consequence of a diminished supply of blood, such as would result from disease of the aorta or of the coronary arteries. Indeed, Bezold has observed that the action of the heart is modified in the rabbit where the coronary arteries or their branches are closed temporarily, after first dividing the pneumogastric, the sympathetic nerves in the neck and the cervical portion of the spinal cord. In the first ten or twelve seconds, no noteworthy change is seen, but gradually the heart beats more slowly and irregularly; there are in the first two or three quarters of a minute alternately fast and slow impulses; and, at the end of a minute or a minute and a half, the ventricles cease to contract; the movements recur, however, as soon as the pressure is removed and the circulation is restored.

Is it possible to explain the symptoms by changes in the pneumogastric nerves? According to Eulenburg, in the majority of cases the state of the pulse is opposed to such an hypothesis. Indeed, the pulse is quick and small, thus indicating a paresis of the par vagum. Yet there are cases in which the pulse is slow, and others in which, with this slowness, an increase in the force has been noticed. These exceptional cases are cited by Eulenburg in favor of the theory of stimulation of the pneumogastric. To these facts should be added a remarkable observation of Heine in which, after symptoms resembling those of angina pectoris, there were found lesions of the par vagum accompanied as well by changes in the phrenic and cardiac nerves. These exceptions show that the changes in the pneumogastric nerve can hardly explain the majority of the phenomena.

It remains to examine the part which the sympathetic nerves may play. These nerves proceed from the brain, from the cervical and upper part of the dorsal portion of the spinal cord, and, passing through intermediate cervical ganglia, their function is to transmit to the ganglia the central excitation, acting in a direction contrary to that of the pneumogastric. Consequently, the excited action of the heart in angina pectoris may be considered as dependent on the exaggerated action of the ganglia through the sympathetic.

This theory that the cardiac plexus and more especially the sympathetic nerves are affected in this disease finds support in an observation by Lancereaux, in which he points out certain histological changes in the cardiac plexus.

The sympathetic system can participate in another way. The sympathetic trunks contain the vaso-motor nerves; changes in these branches will determine local affections in the circulation whence result modifications in the intra-aortic pressure and consequent feebleness of the cardiac impulse.

The complex series of symptoms which characterizes angina pectoris may, in short, be the result of various conditions; may, indeed, exist entirely regardless of any participation by the heart; all the cardiac nerves are more or less involved, and the numerous modifications observed in different patients can be referred to a more or less prominent implication of the nerves of the cardiac plexus, the influence of the nerves of the great sympathetic predominating, since they form the greater part of the plexus.—*Gazette Hebdomadaire.*

Medical and Surgical Journal.

Boston: Thursday, October 13, 1870.

PROFESSIONAL WANTS.

We are induced to append this title to our Editorial for the week, on account of the need which has long been felt among us of a professional headquarters for our city and State. We wish, moreover, to prolong the echo of the discussions which have taken place in our Societies of late on this subject, and so, by keeping the subject before our brethren, lead them to efficient action during the coming season.

It is certainly to be regretted that the nature of our calling makes us, as physicians, solitary beings. Each one goes his daily round, the centre of his own little world, infallible, in his own view, without the aid of an Ecumenical Council, feeling his little jealousies towards his brother who is perhaps encroaching on one of his pet families; thus it is with the profession, and, beside a nod on the streets of our cities or a few words passed from one sulkey to another on our country roads, a large part of the profession hardly interchange a thought or sentiment. It is, to a certain extent, different in our large cities, where we have our societies and hospitals; but even there our wants are not fully or well met. "Like the shingle on the seashore, the power of adhesion in the profession is feeble; it is composed of separate and independent pebbles, each knocking his neighbor below him and keeping him there, if possessed of sufficient power to do so." In this way we lose mutual aid and counsel; we are prevented comparing our knowledge with that of other men, and become, consequently, ignorant of our deficiencies in an ever advancing science. Would that some means might be adopted which should ensure the more frequent professional and social intercourse of our brethren, and so bring about the common good of all.

One great need among us at the present is a professional rallying point, toward which we can look as the headquarters of our brethren for the city. Nor do we speak of our city alone, but for the State and for New England, all parts of which are apt to look to Boston for its cue in the movements of the day. In the city of our publication alone we have some eight or ten medical societies. The Massachusetts Medical Society, for its meetings of Councillors and its Suffolk District Society, have leased rooms, which by reason of architectural improvements in other directions, by the various fractures and attritions of age to be observed in the furniture, and the absence of many conveniences, have become unfitted for our use. The Improvement and Observation Societies occupy the same rooms, for want of better; while the Obstetrical, the Medical Benevolent and the Biological, as well as the student society, the Boylston, either meet at private houses or in other localities. Each one of these last-named organizations, however, would probably gladly meet in a society's building, especially if conveniences were provided for the physical refreshment which renders these gatherings socially as well as professionally attractive. In addition to our own medical societies, the Massachusetts Dental Society and the American College of Pharmacy are also tenants, and would willingly coöperate with the strictly medical societies in providing suitable and convenient quarters. We are confident, too, that we should find a ready associate in still another important scientific society of our city, whose present rooms, we have reason to know, are already needed for other purposes.

We are not proposing a change in the place of meeting of our Boston Societies, for the sake of Boston men alone. What we need is this: a scientific headquarters for the Massachusetts Med. Society, around which, as the older if not more substantial body, the other societies should gather, and, by bearing their proportion of the expenses, should coöperate in maintaining a meeting-place which should be a credit to us.

We need a building or an ample suite, which shall be, in truth, the centre of medical and allied sciences for the New England States; with rooms sufficient for the meetings of the Massachusetts Medical Society, or, at least of its Councillors, for the Suffolk District Society and the other larger or smaller bodies; for the important collection of the Improvement Society, now displayed in an insecure building; and for the collections and libraries of the other societies. We should be glad to see such an establishment made an Academy of Science, which should be the recipient of medical and scientific knowledge for our North-eastern States, for distribution in such way as would be useful to physicians and scientific men wherever located. Is not the present time an important one to take the first step?

THE ALBANY MEDICAL COLLEGE.

We are rejoiced that the insertion in the Journal of an item from a secular paper has had just the effect we desired—to call out a response from the Faculty of the Albany Medical College in vindication of the noble old school we have so long known and respected. The name of each member of the Faculty is held in high esteem among the profession in New England, and it was a cause of great regret to us to receive from a correspondent in Albany the newspaper item which cast reflections on the Albany School. We certainly felt surprised that notice was not taken of the article when it first appeared, and in the locality where its injurious influence must be most felt. The following comes to us:—

Messrs. Editors,—My attention has been called to the paragraph published in your Journal of the 15th inst., in relation to the Albany Medical College. While this paragraph in its original locality might have no importance, yet when copied into the pages of a Medical Journal it seems likely to give rise to erroneous impressions. I therefore ask you to publish the following statement of facts in the case:

The Hon. Ira Harris, alluded to as giving the introductory address at the opening of the Medical College, is one of the Professors in the adjoining Law-School, and President of the Board of Trustees of the Medical College.

His course on Medical Jurisprudence will be delivered before the Law and Medical classes in his own Lecture Hall. He was invited by the Faculty of the Medical College to deliver this course, not on the ground of any medical theories or beliefs he might hold, but solely for his eminent legal attainments and qualifications as an instructor in this department.

Even were his beliefs of the character attributed to him by this unknown correspondent, it is difficult to see how he could well display or inculcate them in connection with the subject of Medical Jurisprudence, but I learn upon inquiry from Mr. Harris himself that he has never been an advocate of the homœopathic system of medicine.

Among a large and mixed audience who listened to the public introductory address of Mr Harris there must have been present persons holding different views on the subjects of Law, Religion and Medicine. The presence on that occasion of three homœopathic physicians (for that is the number actually present as I have been informed) no more identifies the College with their system of medicine, than would the presence of three clergymen of similar religious belief give it a particular denominational character.

The names of the medical faculty of the Albany Medical College are surely a sufficient guaranty of the orthodoxy of the institution, and from the fact that they have been so recently published in your advertising colums as connected with the college, I am the more surprised that you could so carelessly reflect upon them and the good name of an old and honored institution by picking up and publishing the misrepresentations of an anonymous newspaper correspondent.

It is gratifying to know that notwithstanding persistent efforts of a character similar to the one in question to injure it, the attendance of students at the College is larger than usual, and its prospects were never more encouraging than at present.

The Albany Medical College means to deserve the confidence thus shown in it, and in all things to keep faith with and fulfil its promises to the profession.

I remain yours respectfully,
JOHN V. LANSING, *Registrar.*
Albany, N. Y., September 26, 1870.

RECENT experiments by a French physiologist demonstrate that digitalis diminishes the relative amount of urea in the urine; and that this diminution corresponds with the depression of the circulation and is the corollary of it. The action of this agent as an antiphlogistic is thus explained.—*Gaz. Hebdomadaire*, Aug. 12, 1870.

M. BROCA recently exhibited before the Imperial Society of Surgery in Paris the heart of a man thirty-one years old who, with intent to commit suicide, had stabbed himself in two places in the fifth intercostal space. Fifteen days after the injury he died of pyæmia, having, in the interval, inflicted other injuries in the neck and the temple with a fork. At the autopsy it was found that the heart and pericardium had received a penetrating wound. The pericardium was cicatrized. A false membrane bound the right edge of the heart to the parietal fold of the pericardium. On the inner surface of the left ventricle, near the apex, was a firm cicatricial depression. The case demonstrates that solutions of continuity in the cardiac walls are susceptible of being readily healed.—*Ibid.*, August 5, 1870.

DEATH UNDER THE ADMINISTRATION OF CHLOROFORM. On Friday of last week, an unfortunate occurrence happened at the Royal Free Hospital. A man thirty-four years of age had on the previous Wednesday received a severe wound on the finger from a kick of a horse. A suture had been put in at one of the hospitals. He was admitted into the Royal Free Hospital the following evening, with symptoms of tetanus. It was decided on the following day to remove the finger. While the chloroform was being administered on a piece of lint, and after having inhaled the anæsthetic for three or four minutes, he struggled violently, and shortly expired. Every means was adopted to resuscitate the patient, but without success.—*British Med. Jour.*, Sept. 24, 1870.

BY balloon express from Paris, we learn that the Americans remaining in the city are still busy organizing and fitting out ambulances for the use of the wounded. The brevity of our despatch prevents giving particulars.

BOSTON DISPENSARY.—The following are the statistics of this institution for the year ending Sept. 30th, 1870. The number of new patients at the Central Office is 16,994, of which 12,062 are medical cases, and 4932 surgical, classified as follows:—

MEDICAL.

	Men.	*Women.*	*Children.*	*Total.*
1st quarter,	556	916	780	2252
2d "	713	1210	615	2538
3d "	883	1081	1019	2983
4th "	902	1677	1710	4289
Total,	3054	4884	4124	12,062

SURGICAL.

	Men.	*Women.*	*Children.*	*Total.*
1st quarter,	317	315	346	978
2d "	336	327	431	1094
3d "	445	388	435	1268
4th "	543	494	555	1592
Total,	1641	1524	1767	4932

The number of new patients in the Districts is as follows:—

	Men.	*Women.*	*Children.*	*Total.*
1st quarter,	363	738	811	1912
2d "	377	863	1203	2443
3d "	343	866	974	2183
4th "	353	890	1153	2396
Total,	1436	3357	4141	8934

RESULTS.

Discharged, cured or relieved, - - -	8254
Sent to Hospitals, or removed from Districts,	349
Died, - - - - - - - - -	322
Under treatment, - - - - - - -	108
	9033
Under treatment at last annual report,	99
	8,934
Number of cases at Central Office,	16,994
Total number at Central Office & in Districts,	25,928

PATIENTS, NEW AND OLD, AT CENTRAL OFFICE.

	Medical.	*Surgical.*	*Total.*
1st quarter,	4778	1376	6154
2d "	5594	1674	7268
3d "	7359	1831	9190
4th "	7502	2386	9888
Total,	25,233	7267	32,500
Number of cases of midwifery, - -			148
Number of recipes, - - - -			54,487
Number of recipes since July, 1856,			603,428
Number of patients since July, 1856,			283,328
Average daily attendance,			105

SURGEONS.

Francis H. Brown, M.D.
John Homans, M.D.
J. Brackett Treadwell, M.D.
Samuel W. Langmaid, M.D.
AURAL SURGEON—Clarence J. Blake, M.D.

PHYSICIANS.

J. McLean Hayward, M.D.
P. A. O'Connell, M.D.
Charles B. Porter, M.D.
Frederic I. Knight, M.D.
F. B. Greenough, M.D.
Wm. F. Munroe, M.D.
Charles E. Inches, M.D.
J. Franklin Appell, M.D.
David F. Lincoln, M.D.
Henry H. A. Beach, M.D.
Robert Disbrow, M.D.
(Vacancy.)

DISTRICT PHYSICIANS.

No. 1.—Henry Tuck, M.D.
No. 2.—John B. Fulton, M.D. (East Boston.)
No. 3.—Thomas F. Goddard, M.D.
No. 4.—Wm. H. H. Hastings, M.D.
No. 5.—Wm. L. Richardson, M.D.
No. 6.—Alfred L. Haskins, M.D.
No. 7.—Orlando W. Doe, M.D.
No. 8.—Horace S. Everett, M.D. (South Boston.)

A. K. Carruthers, Apothecary; Wilber H. Mason, Assistant Apothecary; Walter A. Bartlett, Second Assistant Apothecary.

SAMUEL A. GREEN, M.D., *Superintendent.*

Medical Miscellany.

We are able to announce that the manuscript of Dr. Hay's valuable University Lectures on "Certain Defects of Ocular Refraction, Accommodation and Convergence" will be placed in our hands for publication.

Dr. Charles B. Brigham, as we learn from his brother, is now in charge of a Hospital at Nancy, France. He volunteered for this service under the former (Imperial) French Government, and, on the capture of the city by the Prussians, was retained for the same duty by that Government. We hope to receive advices from him concerning the surgery of the war, as he sees it.

Defect of Epiglottis.—In place of the epiglottis as normally fashioned, there was found by Dr. Eberth, in a female fifty-six years old, merely a fold of the mucous membrane, 5 mms. high and 1 mm. thick, with a crescentiform body of a fibro-cartilaginous consistence 3·5 mms. high. From the point of insertion of this fold of the mucous membrane of the pharynx spread two other wider folds, which turning backwards, under the pointed angle, united, and with the epiglottidean fold closed the three-cornered glottidean cleft. There was no reason to infer that in this case the defect of epiglottis was a secondary abnormity, it was evidently congenital. There were only slight functional disturbances. The case is one seldom met with. Dr. E. cites, as the only recorded case besides his own, that of Targiom Tozetti; even in this case, however, J. F. Meckel believes the defective epiglottis to have been the result of disease occurring after birth.—*Virchow's Arch.* xliii.

The Lower Forms of Vegetable and Animal Life. Professor George Rollestone, of Oxford, in his late book on "Forms of Animal Life," gives a new criterion by which to distinguish animals from vegetables. He says that in the case of all animals the embryo absorbs its yolk from the inside, while in vegetables the germ of seed is surrounded by its albumen. This is a remarkable foreshadowing of the way in which the adult animal or plant absorbs its food, the former by placing it within itself for digestion and assimilation, while the latter takes its food from outside.—*Med. and Surgical Reporter.*

The Use of Ammonia in Hydrophobia.—Mr. J. Silvester (Knutsford), referring to the use of ammonia in India in cases of snake-bites, relates the following case:—About thirty years ago, a rabid dog passed through this neighborhood; a farmer, who had a cow bitten severely on the nozzle, applied to me for a remedy, but as I knew of none, I refused to interfere; but finding that he would take no denial, and that no means had yet been used, though twenty-four hours had elapsed, I gave him 8 oz. of liquor of ammonia, half the P. L. strength, and a piece of lunar caustic, with directions to have the bitten part cut out immediately, and to apply the ammonia to the wound, and afterwards the caustic, and then to give two tablespoonfuls of the ammonia in cold water three times a day as long as it lasted. Considering the cure barely possible, I thought little more about it; but, to my surprise, about ten years after the farmer called and assured me the cow was perfectly healthy. Several animals bitten by the same dog had to be destroyed.—*London Jour. Ph.*

Subnitrate of Bismuth in the Diarrhœa of Young Children.—Heller, in the *Deutsches Archiv für Klinische Medicin*, vol. vi., recommends, in the treatment of the diarrhœa of early life, the subnitrate of bismuth to the extent of from thirty to sixty grains. In the commencement, Dr. H. gave a dose of the remedy every hour until the diarrhœa was arrested, which usually occurred at the end of twenty-four hours. He had never seen any bad result from the use of the remedy. During the continuance of the diarrhœa the patient is to be debarred the use of milk.—*Druggists' Circular.*

To Correspondents.—Communications accepted:—A History of four Cases of Cerebro-spinal Meningitis which occurred in Providence.—Animal Vaccination.

Pamphlets Received.—Transactions of the Medical Society of the State of Pennsylvania, at its Twenty-first Annual Session, held at Philadelphia, June, 1870.

Died,—In this city, Oct. 7th, Dr. John A. Stevens, aged 58 years.—In Randolph, Mass., Oct. 7, Dr. Henry James Martin, in his 76th year, a Fellow of the Royal College of Surgeons of London, and for nearly forty years a member of the Massachusetts Medical Society. Dr. Martin practised as a Surgeon, for nearly twenty years; afterwards he entered the dental profession, in which, for thirty years, he was very eminent, and well known to many of the older citizens of Boston.

Deaths in fourteen Cities and Towns of Massachusetts for the week ending Oct. 1, 1870.

Cities and towns.	Total.	Prevalent Diseases			
		Cholera Infantum.	Consumption.	Dysentery and Diarrhœa.	Typhoid Fever.
Boston . . .	128	13	18	5	8
Charlestown	10	1	5	1	2
Worcester .	16	1	5	0	2
Lowell . . .	27	4	4	0	0
Milford . . .	6	0	1	1	0
Cambridge .	17	1	4	1	0
Salem	7	0	1	1	2
Lawrence . .	5	0	2	1	0
Springfield .	4	0	1	0	0
Lynn	15	2	2	1	1
Fitchburg . .	3	0	0	1	2
Newburyport	5	0	1	2	0
Fall River .	14	1	5	1	2
Haverhill . .	5	0	4	0	0
	262	23	53	15	19

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Oct. 8th, 128. Males, 61; females, 67. Accident, 2—apoplexy, 4—abortion (criminal), 1—inflammation of the bowels, 2—bronchitis, 3—congestion of the brain, 2—disease of the brain, 3—cancer, 4—cholera infantum, 13—consumption, 18—convulsions, 3—croup, 3—cyanosis, 1—debility, 3—diarrhœa, 2—dropsy of the brain, 1—dysentery, 3—erysipelas, 1—scarlet fever, 1—typhoid fever, 8—jaundice, 1—disease of the heart, 4—hæmorrhage, 1—disease of the kidneys, 1—congestion of the lungs, 1—inflammation of the lungs, 10—marasmus, 11—necrosis, 1—old age, 5—pleurisy, 1—premature birth, 1—puerperal disease, 1—scalded, 1—suicide, 1—teething, 1—unknown, 9.

Under 5 years of age, 52—between 5 and 20 years, 9—between 20 and 40 years, 29—between 40 and 60 years, 21—above 60 years, 17. Born in the United States, 90—Ireland, 24—other places, 14.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

New Series.] Thursday, October 20, 1870. [Vol. VI.—No. 16.

Original Communications.

DEFECTS OF OCULAR REFRACTION, ACCOMMODATION AND CONVERGENCE, AND THEIR TREATMENT BY SPECTACLES AND OTHERWISE.

By G. Hay, M.D., Boston.

Lecture I.—*Anomalies of Binocular Fixation. Refraction of Light by the Eye and by Lenses.*

The study of the optical defects of the eye is in some respects unattractive, as it involves the consideration of certain abstract matters, and especially of geometrical optics. Yet it is also practically important from a medical point of view, not only because such defects admit of being recognized and relieved, but also because it is important to distinguish them from other affections of the eye; for instance, a man past middle life complains of no longer being able to see well at any distance, and fears cataract or even amaurosis. Now it is possible he may be entirely relieved simply by the use of convex glasses. Or another patient has defective vision, and complains of never having been able to find suitable glasses, and has similar fears of amaurosis; but we find that a cylindrical lens will double his vision. It is therefore essential to be able to distinguish between the different affections. The number of cases of optical defects is considerable. Out of 6345 eye-patients at the Infirmary, there were 394 cases of anomalies of refraction and accommodation; that is, about one in sixteen.

It has been found that the optical adjustment of the eye is intimately related with the mutual convergence of the two optic axes. It is therefore necessary to consider these two subjects in connection with each other.

The process of vision consists of three principal parts: the formation of distinct optical impressions on the two retinæ; the transmission of these impressions along the optic nerves to the brain; and, finally, the mental elaboration of these transmitted impressions into *seeing*.

The subject to which I shall ask your attention in the following lectures concerns principally the first of these three parts of vision; the formation of distinct optical impressions on the two retinæ. This part of vision might be denoted by the expression *binocular fixation*, if we may include under the word fixation not only right direction of the optic axis, but also correct optical adjustment. In the present lecture I propose to point out the principal anomalies to which binocular fixation is liable, and their remedies, and to consider in a general way some of the properties of these anomalies, and of their remedies, and certain matters connected with them; we shall thus come to examine some of the properties of the refraction of light when passing through a series of surfaces, as in the eye; also through glass lenses.

As the type of normal binocular fixation may be taken the case of an object directly in front of the observer. In looking at such an object, each eye is normally directed to the object, and optically adjusted for the distance of the object.

Let us see in what way deviations from the normal conditions may occur. In the first place, it is obvious it might be difficult or impossible to maintain the proper directions. The internal recti muscles may be too weak in comparison with the external recti, or vice versâ. Again, the eye may not be able to refract the rays from a point of the object exactly to a focus on the retina.

Suppose these anomalies; what then? To answer this we must look more closely at the process of vision. In vision the pencil of rays from a point of the object is refracted in passing through the media of the eye to a focus on the retina. This focusing must be exact, otherwise the impression received is not distinct. Again, the eye must be directed so that the macula lutea, the most sensitive part of the retina, may come to receive the focal impression.

In binocular vision there is also another motive influencing the direction of the axes.

Suppose one eye to be so directed that the image of the object falls on the macula lutea, for the reason that vision is there most acute; there will, in addition to this, be another reason why the second eye should present its macula to the image of the object; namely, that if it did not, there would be double vision, which is confusing and instinctively avoided.

This relation of the maculæ to each other is only one part of the law of so-called identical points. This law influences not merely the direction of the optic axis, as just indicated, but also the situation of the eye-ball as regards rotation around this axis; you can easily see that for any given direction of the axis there is conceivable any number of situations of a point on the surface of the eye-ball. The study of this law is practically important in connection with the subject of the paralyses of the external ocular muscles; because these paralyses prevent the eye from being properly placed, and in consequence of this, according to the law of so-called identical points, double vision ensues; the kind of double vision is different in different cases and more or less characteristic of the particular muscle or muscles paralyzed.

What are the means of remedying these two kinds of defects; those of refraction and of direction? With regard to the first, the focus may be in front of or behind the retina. An appropriate glass lens with spherical surfaces placed before the eye will then bring the focus to the retina.

It may be that the rays are so asymmetrically refracted that they cannot be considered as tending to any point-focus at all; their focus may be considered as consisting of two straight lines at different distances behind the cornea and at right angles to each other, and each perpendicular to the optic axis. In such case these two focal lines are to be brought together, and the rays thereby made to pass through their point of meeting; this is done by an appropriate cylindrical glass. Then, in addition, a spherical glass may be needed to bring the focus to the retina.

Thus the principal remedies for improper focusing are lenses, spherical and cylindrical.

As to wrong direction of the optic axis, three principal kinds are to be noticed.

1st. The optic axes may be able to attain the required convergence for a short time, but not to maintain it sufficiently long. This defect is called insufficiency of the respective muscles.

2d. Either visual axis may be directed to the object, the other deviating; the deviation measuring nearly the same amount, whichever eye fixes the object; it may, however, vary with the distance of the object. This is the ordinary strabismus, or concomitant strabismus.

3d. Paralytic deviations, in which the deviation may vary according as one or the other eye fixes the object, and also for different positions of the object.

The last require special study. It is chiefly the first of the three kinds which comes within the scope of the present lectures.

For deviations of direction, or tendency to deviation, there are three special remedies.

The first, which is especially applicable to a mere tendency to deviation, consists in influencing the direction of the axes by calling on the eyes for more or less effort of accommodation; we shall see later that the effort to accommodate is accompanied by a corresponding effort to converge.

The second remedy is the cutting of the tendon of one of the recti muscles at its insertion into the sclerotic, in consequence of which the eye turns a certain amount towards the other side from that on which the tendon was cut.

The other remedy consists in using a glass prism, whereby, although the visual axis deviates from the object, the image of the object is brought to the macula lutea. Normally the eye would itself turn and bring its macula lutea to the image.

Other remedies would be applicable in the case of insufficiency of the muscles from general debility.

We thus have presented to us for consideration, the following subjects: The refraction of light through the media of the eye, the action of lenses spherical and cylyndrical, the action of prisms, and the relation of the accommodation to convergence. The two last will be considered in the next lecture.

The first of these, the refraction of light in passing through the media of the eye, must be considered from an optical point of view, as a case of the refraction of light by several spherical surfaces separating media of different densities, and then from a physiological point of view, from which the whole refractive power of the eye is looked upon as divided into two parts; the one relatively constant, and called, by Donders, the *refraction* of the eye, the other variable, and dependent on a change in the eye, and serving to adjust the eye for different distances, and called the *accommodation*.

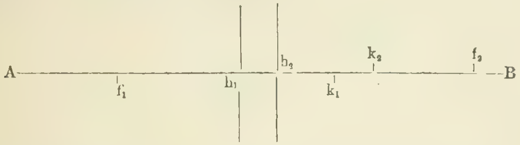
In considering the refraction of light in passing through several spherical surfaces, separating media of different densities, the centres of the surfaces are supposed to lie in one straight line, called the axis, and the rays to be near to and only slightly inclined to the axis. Call n_1 the index of refraction of the medium in front of the first surface, and n_2 that of the medium behind the last surface. Suppose the rays to pass from the first medium through and arrived in the last. Two questions present themselves; first: if the rays in the first medium before refraction diverge from a certain point, to what point will they converge after passing through all the surfaces? second: given the size of an object in the first medium, what will be the size of its image formed by the refracting system?

The question comes up from what point to measure the distances of image and of object.

If the system consisted of a single thin lens, we might neglect the thickness of the lens, and refer the positions of the object and image to that of the lens.

But in a more complicated system, consisting of more than three successive media or more than two surfaces at which the rays are refracted, for instance, in the eye, where we have at least three surfaces, the anterior surface of the cornea, the anterior and posterior surface of the crystalline lens, and four corresponding media, air, aqueous humor, lens substance and vitreous humor, in such case, certain points of reference have been adopted, called cardinal points.

Let us look at the diagram from Helmholtz.



The light is supposed passing from A to B. The position of the surfaces which separate the different media and at which the rays are refracted is not at all indicated in the diagram, but only the cardinal points of the system; these may be different for different systems. There are six of them. Two focal points, f_1 and f_2; two principal points, h_1 and h_2; and two nodal points, k_1 and k_2.

The significance of the principal points and of the nodal points, in the case of n_1 being different from n_2, as in the eye, where n_1 is the index of refraction of the air and n_2 that of the vitreous humor, may be explained as follows: Suppose at h_1 a spherical surface with its centre at k_1. Now the position of any ray after refraction by the whole system is such as would be obtained if the ray were simply refracted at the one supposed surface with the first medium of the system in front of it, and the last medium behind it, and *if in addition thereto* the ray thus refracted were pushed parallel to itself along the axis in the direction from A to B and by the distance h_1h_2 equal to k_1k_2.

In the case of n_1 being equal to n_2, as in the single lens or a system of lenses in air (as in the telescope), k_1 coincides with h_1 and k_2 with h_2, and an infinitely thin lens of a certain convexity takes the place of the above supposed surface. (See Fick, Med. Physik, 1st edit. p. 252.)

Thus (when n_1 is different from n_2) the principal points and nodal points, together with the index of refraction of the first medium and that of the last medium, indicate the resultant refractive action of the whole system. When $n_1 = n_2$, we should wish to know also the position of the focal points.

It will be seen from this resultant that the *nodal points* are such that a ray in the first medium, directed before refraction to the first nodal point, will after refraction be directed to the second nodal point, and will still be parallel to the direction which it had before refraction. This property is sufficiently important to justify the selection of these points as cardinal points.

It will also be seen from this that the size of the image is to that of the object as the distance of the image from the second nodal point is to that of the object from the first nodal point.

A plane passing through a principal point and at right angles to the axis is called a *principal plane.* There are two such, as there are two *principal points.* We see from the preceding explanation as to the resultant action of the whole system, a property of these two planes. For instance: a ray which in the first medium before refraction is directed to a point H_1 of the first principal plane, at a given distance and direction from the axis and near to the axis, will in the the last medium after refraction by the system be directed to a point H_2 of the second principal plane at the same distance and direction from the axis; or, in other words, the two points H_1 and H_2 are in a straight line parallel to the axis.

The focal points are analogous to those of a single lens. Rays parallel in the first medium before refraction pass through the second principal focus after refraction by the system. Rays which in the first medium before refraction pass through or are directed to the first principal focus are parallel in the last medium after refraction.

But the focal distances are measured from the respective principal points. The first principal focal distance F_1 is the distance of the first principal focal point in front of the first principal point. The second principal focal distance F_2 is the distance of the second principal focal point, behind the second principal point; and we have the relation

$$\frac{F_1}{F_2}=\frac{n_1}{n_2}$$

that is, these two principal focal distances F_1 and F_2, which are measured each from the corresponding principal point, are equal in the case of a single lens or system of lenses, in which cases n_1 is equal to n_2; but they are not equal in the case of the eye, where n_1 is not equal to n_2.

If we measure the distances of the principal focal points, not from the corresponding principal points, but from the corresponding nodal points, and call $f_1 k_1 = G_1$, and $f_2 k_2 = G_2$, we shall have

$$G_1 = F_2$$
$$G_2 = F_1$$

This very meagre explanation will enable us to understand the formula for the relative position of image and object,

$$\frac{F_1}{p}+\frac{F_2}{q}=1, \qquad [1]$$

in which p represents the distance of the object in front of the first principal point, and q the distance of its image behind the second principal point. The values of p and q admit of being geometrically constructed, either with assistance of the cardinal points or from the formula.

The relation of the relative distance of the image to that of the object might be otherwise expressed, either by a formula in which the distances would be measured from the respective *nodal* points, or by another in which the distances would be measured from the focal points.

It ought also to be mentioned that Helmholtz has given formulæ for combining two refractive systems into one; for finding the cardinal points of the combined system if we know those of each of the separate systems; as, for instance, to consider the combination of a glass lens and the eye as a compound system, the cardinal points of which it is desired to find.

In the normal eye, accommodated for distance, the *principal points* are, according to Helmholtz, very near each other, and about in the middle of the anterior chamber; the *nodal points*, consequently very near to each other, are very near to the posterior surface of the crystalline lens. The second *principal focal point* is just in front of or at the retina.

The refraction of the eye from a physiological point of view will be subsequently considered.

In the case of the single lens, n_1 equals n_2, and $F_1 = F_2$, and the equation [1] becomes the familiar one

$$\frac{1}{p}+\frac{1}{q}=\frac{1}{F} \qquad [2]$$

The distances p and q in this formula are to be counted from the corresponding nodal points, which in bi-convex and bi-concave lenses are within the lens. If in such lenses the radii of the two surfaces are equal, the first nodal point is about one third the thickness of the lens from the anterior surface, and the second nodal point the same distance in front of the second surface, both being within the lens. If the lens is thin we get a sufficiently correct result by neglecting the thickness and measuring the distances from the middle of the lens, and it matters not which surface of an equi-bi-convex or equi-bi-concave lens is turned towards the eye.

In using one of these lenses, it must be placed very nearly perpendicular to the direction of the object; otherwise a homocentric incident pencil becomes astigmatic after refraction by it, and the image is indistinct and not symmetrical with the object. This is also the case to a certain degree if we look through the lateral part of the lens. It was stated above that the formulæ hold for rays which are near the axis of the system and make only small angles with it.

The formula above [2] can be used in two ways; either to find the lens which will bend the rays in the desired way, or to find in what way the given lens will bend the rays from the given point. In using the formula the F is a positive number, say 6 (inches), for convex lenses; and a negative number, say minus 6 (inches), for concave lenses. The *p* is the distance in front of the lens of the focus of incident rays. If, however, the incident pencil is convergent towards the lens, that is, has its virtual focus behind the lens, then the distance *p* is to be taken as negative in the formula.

Again, *q* is the distance behind the lens of the focus of the refracted pencil. If, however, it should be in front of the lens a virtual focus, as is often the case, then it is to be taken as negative in the formula. This is usually the case in Donders's formula for accommodation.

Convex lenses make the rays less diverging or more converging. Concave lenses make the rays more diverging or less converging.

As the refractive power of lenses is greater as the focal distance is less, it may be represented by the fraction, unity divided by the focal distance. Thus the refractive power of a lens of 6 inches focal distance may be represented by the fraction $\frac{1}{6}$. In the formulæ with reference to the action of lenses, the focal distance often enters as the denominator of a fraction whose numerator is unity.

The focal distance of a spherical glass lens, with surfaces of equal curvature, is nearly, though not quite, equal to the radius of the spherical surface.

The formula for the thin bi-convex or bi-concave lens which shall be equivalent to the sum of two such lenses placed close together, either both bi-convex or both bi-concave, or one of each, is :—

$$\frac{1}{m}+\frac{1}{n}=\frac{1}{L} \qquad [3]$$

in which L is the focal distance of the lens equivalent to the combination of the two whose focal distances are respectively *m* & *n*.

There are other spherical lenses besides bi-convex and bi-concave. If one surface is convex and the other concave, as in periscopic glasses, then one or both nodal points lie outside the lens, and the effect of the lens will be different, according as one or the other surface is turned towards the eye.

The advantage of the periscopic glasses is, that with the radii of the two surfaces in a certain ratio to each other, and with the right surface turned towards the object, there is less spherical aberration, and consequently less indistinctness in looking through the lateral parts of the glasses. If the wrong side is turned towards the object the spherical aberration is however increased. Strictly speaking, one form of the lens would be free from spherical aberration only for one distance of the object; therefore certain forms have been selected as being on the whole the best. If a plano-convex lens is used for near objects its plane surface should be turned towards the object.

Another point often mentioned as belonging to a spherical lens is the *optic centre;* this is a point of the axis such that any ray in the substance of the lens and directed to this point, or passing through it, has a direction after refraction by the lens parallel to what it had before refraction. The *optic centre* is to be distinguished from the *nodal points.*

DEATH OF A DIABETIC PATIENT, WITH SOME PECULIAR ACCOMPANIMENTS.

By Charles E. Buckingham, M.D., Boston.

I was called on the 5th of October, to see Miss B. It was then about 6½ o'clock in the evening. She had arrived about two hours previously from Canton, where she had been teaching school for a few weeks. She was sitting in bed, with the legs extended upon the thighs, breathing stertorously, very much flushed, and throwing her arms about. Except that she had contracted pupils, her appearance was very much like that which is seen in stramonium poisoning. Shading the eyes did not produce dilatation. The only reply I could get from her was "Yes, sir." The pulse was 120, not strong; the respiration was 22 in the minute. Neither percussion nor auscultation gave any abnormal sound, except the stertor spoken of, either about heart or lungs. At the time of her arrival, she was brought into the house by the hack driver, who said that he thought "she had been taking chloroform, as she smelled like it." Nothing of the sort was noticed by me.

She was a small, but well developed young lady, with no sign of emaciation, and none of the sallowness attendant upon diabetes, though it was said that she had been suffering from that disease for some two years. There was about a pint and a half of very pale, limpid urine shown to me as hers, and, on examining it, I obtained the following result:

Density 1026. *Reaction* acid. *Chlorides* diminished. *Albumen* a trace. *Sugar* abundant.

At 9.20, P.M., the pulse was 114, respiration 22. Dyspnœa apparently less. Perfectly quiet—seems unconscious.

Oct. 6th, 8½, A.M.—Face very much flushed. Hands and feet very warm. Perfectly insensible. No pulse in either radial artery, but in brachial about midway it is 120. Respiration 19. Slight double divergent strabismus. Pupils contracted. As late as 11½, P.M., is said to have answered "yes." Passed urine involuntarily during night.

She died at about one o'clock, P.M.

It having been reported that she had been assaulted, on the morning before death, and that she had complained of being struck upon the head with stones, a partial examination of the body was made on the 8th of October, by order of the coroner. It was impossible to do more than examine the head, in consequence of the lateness of the hour, and the want of light. The examination was made by Dr. Swan, in the entry of the town hall, at Hanover, Mass.; Dr. Kean, of Washington, D. C., and myself, being present. There was not the slightest evidence of contusion, nor any effusion of blood either within or upon the skull.

Reports of Medical Societies.

OBSTETRICAL SOCIETY OF BOSTON. SECRETARY, DAVID F. LINCOLN, M.D.

March 12, 1870.—The Society met at the house of Dr. Ayer, at 7½, P.M.; the President, Dr. Buckingham, in the chair.

Dr. Minot reported two cases:—

Case I.—*Secretion of Milk restored by Electricity.* A married lady had had two children, and in each case the flow of milk was abundant. Had typhoid fever in August, 1869. Confined January 8th, 1870, for the third time. Milk appeared in the breasts on the third day, but on the fourth it diminished, and for several days it was almost wholly absent. On the evening of the 13th, the interrupted current from a Farmer's battery was applied for about 2½ minutes to one side of the breast, and then for the same length of time to the other side, the poles being covered with moistened sponge. Little pain and but slight redness accompanied the operation. The milk had increased very decidedly on the next morning, and after five days' use of the current, with a daily application, it was quite abundant. Reference was made to Dr. Barker's paper upon this subject in the *New York Medical Journal.*

Case II.—*Placenta Prævia.*—A negress, who had had three previous good labors. While near her full period, on the evening of March 7th, she had a tremendous gush of blood from the womb. Dr. James F. Harlow was called, and found the os dilatable and soft, and the placenta presenting. Dr. Minot was called in consultation about 2, A.M. The pulse was 88, condition of patient fair. The placenta was centrally implanted, and its edge could not be felt. It was decided to attempt version by the foot; and if that were impracticable, to peel off the whole placenta. The latter operation became necessary; it was executed rapidly and successfully by Dr. Harlow, who afterwards performed version. The placenta had been off at least twenty minutes before the head was born. The child was still when born, but was resuscitated by Marshall Hall's method.

Dr. Reynolds inquired if the members thought it important to secure both feet in turning.

Dr. Putnam only gets one foot. Thinks that when the placenta is as central as in the case cited, there is likely to be less hæmorrhage.

Dr. Reynolds related the case of a young woman, two months pregnant, who suffered from palpitations and short breath, slept poorly, had a pale, leaden complexion, and a general condition of marked anæmia. He ordered muriate of iron and bromide of potash, and she miscarried twenty-five days later. He desired to know if any causal relation could be supposed to exist between the use of iron and abortion. He had been informed upon good authority that professed abortionists use iron in accomplishing their purpose.

Dr. Minot said he thought that iron was only dangerous when used in the form of a wire.

Dr. Putnam had never seen reason for believing that it did harm in pregnancy.

Dr. Abbot considered it quite safe.

The President had heard Dr. Jacob Bigelow say, *à propos* of the fluid extract of cotton-root, that in all his experience he had never found reason to think that any medicine, unaided, had the power to produce abortion, except where the tendency to abort already existed.

Dr. Minot held the same belief. Cotton-root was not at all reliable in the form of extract, nor at all certain as a specific.

Dr. Lyman thought otherwise, and instanced the case of a patient of his. Tansy tea, Hooper's pills, which are largely aloetic, with some scammony, and Clarke's female pills, are popular abortives.

Dr. Ayer mentioned the case of a young lady, a patient, who danced several nights in succession, with the effect of obtaining the desired abortion. He thought that this form of exercise was very likely to bring on abortion.

Dr. Reynolds had found chlorate of potassa, in half-drachm doses three times daily, as recommended by Robert Barnes, of service where several children have been successively born dead. It is said to increase the arterialization of the blood.

Dr. Putnam had lately found this remedy of use. His dose had been one scruple, and had been continued for two or three months consecutively, apparently with benefit.

Dr. Read gave Sir James Y. Simpson the credit of first proposing this treatment.

Dr. Reynolds cited the case of a woman, the only survivor of a numerous phthisical family, who had had seven stillborn children, without any suspicion of venereal disease; the eighth was born well, and is now well. The mother took tinct. ferri muriatis during the last two months of pregnancy.

Dr. Read reported a case. Woman, æt. 23 or 24. Married last June. Menses appeared regularly until January; ceased on the 10th of that month. January 20th, she began to flow; was treated for miscarriage. When he saw her, three days ago, the flowing was still going on; the os was tight, the cervix hard, and a putrid odor was present. He advised to desist from the administration of drugs. Last night an entire ovum came away, with masses—perhaps of placenta—attached.

Dr. Cotting described "two and a half" cases of his own:—

1. Second child. Repeated hæmorrhages three or four weeks before delivery. Turned directly. Recovery slow.

2. Was about to turn, when the head came down and plugged the orificium uteri, and all went well.

3. When he arrived, the placenta and head were coming into the world; the woman died almost directly.

Dr. Lyman spoke of the occurrence of occasional hæmorrhage during pregnancy, from about the 4th month, in the absence of placenta prævia.

Dr. Wellington spoke of a case where hæmorrhage occurred within a few weeks of labor, but not at all during the labor itself until after the child was born, when great gushes of blood came. Was there a partial detachment of the placenta?

Dr. Putnam asked if there was any better remedy than the muriate of iron for purpura caused by hæmorrhage. This particular preparation of iron was objectionable, as it caused temporary discoloration of the teeth.

Dr. Abbot considered purpura and bleeding as equally symptoms of the same dyscrasia. Sulphate of quinia and iron were the best remedies.

Dr. Lyman. Quinine was generally successful in the army, especially in cases caused by malaria.

Dr. Buckingham spoke of the alleged injury to teeth caused by muriate of iron. He advised the teeth to be smeared with butter before the medicine was taken. Only places denuded of enamel suffered.

Doubt was expressed by several gentlemen as to whether the drug really did the harm supposed.

Drs. Ayer, Reynolds and Lyman agreed from personal experience as to the especially evil effect produced upon the teeth by the syrup of iodide of iron in the case of infants and young children.

Dr. Cotting asked the probable source of the discharge of liquid two weeks before labor; sudden, and in considerable quantity.

Dr. Ayer suggested the presence of small sacs between the chorion and amnion, not communicating with the main sac.

Dr. Reynolds believed that the main sac might rupture high up during labor, and the fluid escape between the membranes, as in a dissecting aneurism.

Dr. Buckingham spoke of a case where drainage of a watery fluid commenced two weeks before delivery.

Dr. Lyman mentioned a similar case; labor did not occur for two weeks.

Dr. Reynolds remarked that some women were liable to such an occurrence four weeks before their full time. He inquired regarding the source of slight hæmorrhages occurring at various times during pregnancy.

Dr. Lyman spoke of a case, elsewhere reported, where the woman menstruated *only* during pregnancy. The last child was born at the age of 56.

Dr. Buckingham, in reply to a question of Dr. Reynolds, said:—I know that after the use of ergot the placenta is often shut into the womb after the labor is concluded, by irregular contraction. And, when great debility is present, you may give ergot and the pains will often cease, to return immediately upon the administration of opium. I always give opium with the ergot. For several years I have seldom given ergot, except just after the completion of the second stage of labor. Opium is a stimulant, which will often excite contractions, without producing sleep; or, if the patient sleep from the opium, contractions return immediately on waking. I seldom give ether without regretting it, on account of subsequent hæmorrhage. I commonly give a large dose of opium, where simple exhaustion without much bleeding is present, and have never seen excessive sleep resulting from it. I do not refer to cases of irritability. By a large dose I mean ʒss.-i., or even two and three drachms.

Saturday, April 9th, 1870.—The Society met at the house of Dr. Abbot; the President, Dr. Buckingham, in the chair.

Dr. Minot spoke as follows. A young lady, a patient of mine, has had two perfectly normal labors. It is now the beginning of the eighth month in her third pregnancy. On the 3d inst., she drove to church. In the afternoon, she had a large gush of blood from the womb, on straining moderately at stool; I estimated it at one pint. She was put to bed. The cervix was found spongy and soft; the os easily admitted the tip of the finger. On the 5th, she had a discharge as large as the ordinary monthly evacuation, lasting till the 8th. Is it a case of placenta prævia—as I suppose—and what is to be done? I propose to wait. She expects confinement on the first of June. If a great gush of blood comes, ought I to plug, or quickly to deliver?

Dr. Wellington advised to take away the fœtus as quickly as possible, when it is found that it must come.

Drs. Abbot and Lyman saw no present necessity for operation.

Dr. Lyman thought, that in case of another hæmorrhage, it would probably be best to operate immediately; and a Barnes's dilator should be ready.

In case of imminent exhaustion, Dr. Putnam advised artificial removal of the placenta and immediate delivery by forceps—not merely for the sake of the child, but that the mother should be saved any unnecessary fatigue, and the chances of secondary hæmorrhage lessened by contraction of the uterus.

Dr. Buckingham described his last case. The woman supposed herself to be two weeks before her term; but it turned out to be six weeks. He introduced the ordinary rubber plug three times, with some days' interval between. Before using it the last time a clot of blood as large as the fist was voided; after removing the ball the os was three inches in diameter, and half-covered by the placenta; the membranes were then ruptured and the child was born "instantly."

Dr. Buckingham described a case where the placenta half-covered the os. He punctured, and brought down the leg; then the breech; but there was no diminution of hæmorrhage. The child was taken away, but the woman died in ten minutes. There had been no hæmorrhage previous to the day of labor.

He mentioned a case of purpura, that had lasted some weeks, when a sudden gush from the uterus occurred, and the patient died before she could be delivered.

Dr. Lyman remarked that many women die from their desire to save the child.

Drs. Putnam and Minot said that, judging from their own experience, the operation of stripping off the placenta was not a very difficult one.

Dr. Putnam said the exhaustion of the patient ordinarily made the os flaccid and easy to dilate.

Dr. Buckingham has usually treated the os with a plug till it is two fingers wide, and has then found no difficulty in dilating it with his hand at pleasure.

Dr. Putnam described a case of central attachment. During the night of the 28th, pain in back followed by 4 or 6 oz. coagula. Os uteri high up; no coagula in vagina. 29th. Os widely dilated—placenta projecting into vagina. No hæmorrhage. Fœtal pulse 160. Strong pains came on four hours afterward. The membranes were now ruptured—the child in 2d position was turned, the left hand being passed at one edge of the placenta. No hæmorrhage; child living. Placenta immediately removed without difficulty.

Dr. Abbot spoke of a case previously reported; a lady who had had an abortion without assignable cause, and in a subsequent pregnancy flowed almost every day for three months, beginning with the third month. She was delivered naturally, and at the full term, of twins.

Dr. Read spoke of the great significance of a little draining of a brownish, hardly hæmorrhagic, slightly fœtid fluid, before the third month of pregnancy.

Dr. Ayer coincided with Dr. Read.

Dr. Reynolds thought that in early miscarriages, where both pain and flowing are present, the child is hardly ever saved.

Dr. Read showed a fifteen days' ovum. The patient knew the date of conception, and used means to cause abortion.

The Society then adjourned.

Medical and Surgical Journal.

Boston: Thursday, October 20, 1870.

YELLOW FEVER IN BOSTON.

We call attention to the following card from the City Physician:—

Office of City Physician, City Hall,
Boston, Oct. 15, 1870.

The public are hereby informed that no alarm need be felt at the report in the morning papers in regard to yellow fever at No. 60 Richmond street. Four negroes, inmates of the above house, have died suddenly with symptoms somewhat similar to that disease, and one more is sick, but likely to recover. No illness of any kind has since occurred among the numerous inmates of said house, all of whom have been removed to Gallop's Island, nor are there any similar cases in any other part of the city. Furthermore, it is well known that frost invariably puts an end to the above-named fever, which, did it exist, could last only a few days.

William H. Page, M.D.,
City Physician.

We regret that Dr. Page has failed to say distinctly whether or not, in his judgment, yellow fever *has* been present in our city this fall. The letter quoted above we fear is more calculated to excite, than allay the popular anxiety.

In connection with the case we cannot fail to call attention to the fact that the men landed from a whaler, at Provincetown, between the middle and last of *August*, and the first, as we learn, was not taken sick until September 15th. We may presume the voyage to have added some weeks to a period of incubation already too much protracted. The fact of a "congested brain and the presence of bilious matter" in the stomach we do not suppose to be necessarily pathognomonic of yellow fever.

Mr. John T. Blackmore.—It is with sincere regret that we announce the retirement of Mr. Blackmore from the important position he has held in the office of the Medical Journal for many years. The state of his health and his increasing years admonish him to give up the more active duties of life, and he will shortly leave Boston to take up his residence with his son, near Hampton, Va.

Mr. Blackmore has been connected with the Journal for eighteen years. His former life had been singularly varied; his residence during his early manhood in the various countries of Europe and the then distant parts of America, and the peculiar nature of his duties for many years, brought him into contact with people of all classes and of every tongue. During his life he has been a person of varied and careful reading; his accurate memory and his ready perception of the best and most correct writing have been the means of leading him to store his mind with information on all topics of interest and importance. He has devoted himself quite extensively to the classics and the modern languages, and we have frequently had occasion to seek his aid, where our knowledge has been at fault.

It is, however, to the medical profession, and in connection with the Medical Journal, that Mr. Blackmore is best known. Probably no man is more conversant with the *personnel* of the members of the Massachusetts Medical Society than he. Always at his post, always faithful to duty, very methodical and accurate in what is entrusted to him, ever kind and obliging—his venerable figure cannot fail of being missed by every member of the profession who visits our sanctum, and his well-known hand-writing will no longer appear in connection with the Journal and other publications which are issued from our office. A former Editor truly says:—"He has been of *incalculable* service to the profession of the city and of the State; and the M.M.S. will, I am sure, greatly miss his deft hand and willing heart in their cause."

On mentioning the retirement of Mr. B. to two members of the profession, we were much gratified at their immediate expressions of kindly feeling and esteem for him. They suggest that the profession manifest its appreciation of his services in some way that will be practically useful to him. They have themselves contributed liberally. The Editors of the Journal heartily coincide in the plan suggested, and will take charge of such further aid as its patrons and the friends of Mr. Blackmore may place in their hands.

As Editors and members of the profession we heartily wish him God-speed, and a happy and peaceful home at the South.

British Medical Degrees for Sale.—In the Journal of September 22d we took occasion to refute the imputation contained in the London *Lancet* of August 6th, that degrees could be purchased in American universities, and in connection with our remarks we copied a letter from a former graduate of Harvard, which showed the falsity of the implication regarding our own Alma Mater. Were we disposed to be critical or to take unfair advantage of our respected cotemporary, we might pass unchallenged the correspondence which we give. We however quote it in full, in order to point out the dangers which the profession may suffer, small though they be, at the hands of unscrupulous men.

The following advertisement recently appeared in a copy of a secular newspaper:—

"For Sale. — A Physician's Diploma granted by the College of Surgeons, Dublin; a rare chance for an enterprising man. Address ———."

A friend, intent on investigating the matter, forwarded a letter to the address given —of course under a pseudonym—representing himself to be in need of a diploma and asking its price. To this he received the following answer:—

"———, Sept. 30th, 1870.

"Dear Sir,—In reply to yours of yesterday I would reply that the diploma can be made of *use* to you in one way only, viz., by the substitution of your name for that of the person to whom it was granted, and who is now deceased and has never been in this country.

"There are two diplomas, one granted by the College of Surgeons, Dublin, the other by the University of Edinburgh, Scotland. Both are distinct and separate instruments, bearing the seals of the respective institutions who issued them; they are printed on parchment, that granted by the Edinburgh University being the more imposing document.

"I want $100.00 for the latter, but might take less for the other. Can grant you an interview if you desire it, and remain

"Yours respectfully, ———"

We feel it beneath the dignity of the position we hold as journalists to impugn the honesty of institutions which we can only name with respect; we should be recreant to duty did we strive to fabricate from the dishonesty of any person a baseless story concerning the Universities of Great Britain. The writer of the letter gives evidence in his own hand-writing of his lost sense of honor; the trick is too palpable to bear any cloak; the circumstance, however, serves to point a moral in our hands.

We trust our friends in Great Britain will give us credit for the honesty of our intentions in exposing a fraud on their universities, and that our venerable London cotemporary will be willing in the future to correct false impressions which may arise among its readers in reference to American universities.

Animal Vaccination. *Mr. Editor,*—For twelve years I have devoted "especial attention to the selection, propagation and supply to the profession, of the best possible stocks of humanized vaccine virus." During that time I have been in correspondence with many thousand physicians in every part of the country, and have been made aware, in almost innumerable instances, of the desire that exists that a virus might be obtained, direct from the animal, without any human admixture or antecedent.

I felt naturally very desirous, on all accounts, to meet this widely expressed demand, and, with that view, all my hopes of discovering an original case of cowpox in this country having, in repeated instances, been doomed to disappointment, I despatched a special agent to Paris, in June last, with instructions to inform himself, thoroughly, of the details of animal vaccination as there practised since 1866, to obtain all necessary apparatus, authenticative documents, and a supply of animal lymph in such forms, quantities, and from such a variety of subjects as should be likely to insure the successful inauguration of the method into America.

My agent was furnished with letters to several of the leading physicians of Paris, to the American Minister there, and to the Minister of the Imperial Government, whose department included the whole matter of

Government and public vaccination in France. Every possible facility was afforded by the late Imperial Government, and especially by all the eminent medical officials, to whom the immediate care and direction of all matters connected with vaccination were then intrusted.

The result of all these kind offices and of the persistent industry and patience of my agent was all that could have been hoped, and, considering the circumstances in which Paris was placed during the latter part of his stay, far more than might have been expected.

My agent returned on the 20th ultimo. He had sent me several supplies of lymph by mail, before that time, with which I had experimented on a small scale, and with a certain amount of success; but immediately upon his return, with a very large amount of virus, obtained, under his immediate observation, from a great number of different animals, I commenced an extensive series of vaccinations of heifers and infants. These labors have already resulted in the successful vaccination of many of both sorts of *vaccinifer* with, 1st, the original cowpox, discovered at Beaugency, in 1866, perfectly authenticated, and, since then, transmitted from heifer to heifer in unimpaired and even increased excellence; 2d, the cowpox obtained by inoculating a heifer from an original case of horsepox and perpetuated from one animal to another in the same manner as the cowpox of Beaugency.

I had determined not to offer these new sources of supply, however loudly commended in Europe, unless I should, by experiments made by myself, ascertain that they really deserved to be introduced and recommended, that, at least, they were not inferior to the excellent "stock" (of the National Vaccine Institution of London) which I have supplied for so many years.

In case that I had found the new lymph unworthy of commendation, it was my intention to have published an account of my experiments therewith, and to let it drop, no matter how great my disappointment and pecuniary loss might be.

I have, however, fully ascertained, already, that both sources of vaccine supply are perfectly reliable. My vaccinations of infants, made with the original lymph, are successful to a degree fully equal to what I had hoped, and much beyond my anticipations, in view of the well known difficulty in communicating original cowpox to the human subject. All the vaccinations, amounting to over twenty, that I have made with lymph at one remove from the cow, have been successful; not a vesicle has failed to appear at each place of insertion. I have also successfully vaccinated several young heifers, and the second generation of cowpox, on the animal on this side of the Atlantic, is now in process of development.

Knowing the very general popular prejudice which exists against humanized lymph, and how widely the same prejudice has extended to the profession; knowing also how very great, and increasing an obstacle this prejudice, whether justly founded or not, presents to the extension and progress of the infinite blessing of vaccination, I have considered it nothing less than a duty to make the preceding statements without a day's unnecessary delay.

In a few days I shall have such arrangements completed as will enable me to invite all who may feel an interest in animal vaccination to see the disease in the heifer, to bring patients to be vaccinated therefrom, and to obtain, if it is desired, their supplies directly from the source. I also purpose, as soon as my observations shall be sufficiently numerous and complete, to offer to the profession through your columns a paper on the subject of animal vaccination, based on such personal experience, and on the numerous documents that I have received from Paris. My only object in the present communication is to notify the profession that two new and important "stocks" of non-humanized cowpox lymph have been introduced and established in America. In this way I answer a great many inquiries made by letters and verbally, and perhaps may teach others, interested in the subject, who have not, as yet, honored me with their correspondence.

HENRY A. MARTIN.

27 *Dudley street, Roxbury.*

UNIVERSITY LECTURES.—At the meeting of the Corporation of Harvard University held in this city, October 12th, the following gentlemen were appointed University Lecturers in the Medical School for the current academic year, viz.: John E. Tyler, M.D., on Mental Diseases; Henry W. Williams, M.D., and Hasket Derby, M.D., on Ophthalmology; Clarence J. Blake, M.D., on Otology; Frederic I. Knight, M.D., on Laryngoscopy; George Derby, M.D., on Hygiene; and Robert Amory, M.D., on the Physiological Action of Drugs on man and the lower animals.

New York State Inebriate Asylum.—The following announcement is respectfully submitted to the consideration of the medical profession, and to the public in general:

It is believed that the experience of the past five years has demonstrated not only the utility but the necessity of the institution known as the New York State Inebriate Asylum. We speak advisedly when we affirm that at no time have its prospects for usefulness been more promising, or has it been in so good a condition, so far as the treatment of patients is concerned, as it is now. We have sought to make it what it was originally intended to be, a reformatory christian home.

There are very many persons in our State and throughout the country, the victims of a terrible mania for drink, who need the salutary treatment which this Institution affords, and who, without such aid, must in all human probability perish. We, therefore, disclaiming every object except an earnest desire to aid in restoring to their friends and to society a class of men fallen indeed, but not beyond recovery, would earnestly commend this Institution as an efficient means for securing an end so important and inestimable.

We deem it proper to state that ample means are provided to meet the physical, intellectual and religious wants of the patients. The Asylum occupies a remarkably healthful and beautiful site. It is furnished with baths, and a great variety of amusements; with a good library and reading room, which is supplied with the leading daily newspapers and the American and British magazines.

The Asylum has been placed under the charge of Dr. Daniel G. Dodge, a man of superior administrative qualifications, and towards whom there is but one sentiment prevailing with the officers of the Institution and among the patients, that of profound respect for him as a Christian gentleman, and confidence in him as a skilful physician.

Willard Parker, M.D.,
New York,
President Board Trustees.

Binghamton, N. Y., Oct. 1, 1870.

The Photographic Review of Medicine and Surgery, a publication now for the first time offered to the profession, has for its object the presentation of the most interesting cases coming under notice. The Photographic Review will appear in numbers, every other month, each containing four photographic plates, with appropriate notes and remarks. Subscription, $6.00 per annum. J. B. Lippincott & Co., Publishers, Philadelphia.

From the Fourth Annual Report of Dr. A. M. Shew, Superintendent of the General Hospital for the Insane, of the State of Connecticut, we make the following extracts:—

"At the date of the last report there were remaining two hundred and nine (209) patients, of whom one hundred and seven (107) were males and one hundred and two (102) were females. There have been admitted during the twelve months to this date, one hundred and thirty-four (134) patients; seventy-eight (78) males and fifty-six (56) females. Of this whole number, three hundred and forty-three (343), forty-three (43) were discharged recovered, eighteen (18) were discharged much improved, twenty-seven (27) were discharged not improved, twenty-one (21) died and two were found not to be insane, leaving the number now in hospital two hundred and thirty-two (232), of whom one hundred and fourteen (114) are males and one hundred and eighteen (118) are females. The daily average during the year is 225·27. * * * * * "Experience shows that treatment in early stages of the disease is attended with success in a majority of cases, while only a small proportion are restored to health and reason when several months are allowed to elapse before the patient receives systematic hospital treatment. * * * * Chronic cases often require the most attention, and, when at large, are the most annoying to the public. This is especially true of cases of periodical insanity and epileptic mania. * * * *

"Twenty-one deaths occurred during the year. There were in April three (3), in May one (1), in June one (1), in July three (3), in August three (3), in October two (2), in November four (4), in February three (3), and in March one (1). Thus the number of deaths during the year equals 6⅛ per cent. of the whole number under treatment. The disproportion of deaths between the sexes is noticeable, as only three have occurred among the women, the average number of whom in the hospital exceeds that of the men.

"In the cases that have terminated fatally, we observe an undue proportion of deaths soon after admission. The excitement of removals, and the fatigue of journeyings, &c. &c., are often prejudicial to insane patients. It is a matter of deepest importance that discrimination on the part of those who remove patients to the hospital be conscientiously, calmly and wisely exercised. In deciding when to send, the judgment of a physician should always be obtained by friends and officials. This precaution would often prolong the lives of those whom they seek to benefit. * * *

"In this connection I ought, perhaps, to state a fact not sufficiently understood, that in the treatment of mental disorders little reliance is placed on the action of drugs. The prevailing favorable influence in the treatment of insane persons consists in removal from the influences previously surrounding them at home which may have been active in causing the disease. Attempts of friends at control tend only to increase the inherent sense of arbitrariness while in the accustomed rooms and home. A powerful maniac, who has been the terror of family and community, will ordinarily quietly submit to the rules of an institution, and be guided and influenced by a kind word from an intelligent attendant who is an entire stranger. The earlier in the disease that this change is made, the greater are the chances of speedy and permanent recovery. The very fact of being a stranger among others having each peculiar delusions and habits, awakens new trains of thought and feelings, which end in a kind of self-examination and self-control, with subsequent improvement. I have repeatedly been told by patients who had recovered, that their first consciousness of deviation from a supposed sane condition, was induced by comparisons of themselves with the insane companions in the wards. Apprehensions generally entertained by the inexperienced, that a mild case of derangement would be intensified by contact with a large number similarly affected, is not confirmed in experience. On the contrary, in well-regulated hospitals, where attention is given to the classification of patients, to regularity in eating, sleeping and amusements, beneficial changes are often soon recognized by the patients themselves, indicating that restoration to health has begun.

"In these progressive stages of convalescence, too much praise can hardly be awarded to competent attendants, who act the part of friends, directing and encouraging the feeble intellect by kind and gentle acts, even when at first coldly received and perhaps unappreciated for months. It is during this stage that patients need to have their minds diverted and occupied by various amusements, or by light employments, chosen wisely to meet their characters."

Poisoning by Carbolic Acid, in a case of Acute Eczema. Reported by T. G. Roddick, M.D., Assistant House Surgeon, Montreal General Hospital.—Thomas Hobbs, æt. 80, was admitted into the Montreal General Hospital under care of Dr. Fraser, on the 18th April, 1870, suffering from Acute Eczema, intense in degree and affecting the whole cutaneous surface. The patient had been troubled with the disease for about five weeks previous to admission, and had been treated for scabies with the ordinary sulphur ointment. The arms, legs and trunk were literally covered with the disease, and it had invaded his scalp for a short distance behind. He was very feeble, and indeed had to be assisted in and out of bed.

For the first three or four days after admission, he was ordered ung. zinci. to be applied over the diseased surface, twice a day, and in the interim a tepid bath. This plan of treatment had no marked effect on the disease, so on the fifth day the dresser was instructed to apply on lint an ointment containing one part of carbolic acid to four parts of lard, over the arms and thighs, and to cover the whole with oil silk. This application was faithfully made about four o'clock in the afternoon, and at half-past five the nurse reported that the old man was dying. When seen, as he was almost instantly, he was found to be in profound coma, with the pupils firmly contracted; breathing stertorous; pulse weak, quick, and flickering; whole surface of the body livid; extremities cold; large quantity of mucus in bronchial tubes; inability to swallow; profound insensibility. The patients in the same ward had seen him half an hour before, crawl out of bed, and, after sitting on the chair a few moments, fall to the floor apparently in a faint. He was lifted to his bed and taken no further notice of till the nurse gave the alarm.

It was thought that the extensive application of carbolic acid would account for his condition. So accordingly the dressings were instantly thrown off and the part washed thoroughly with soap and water. At the same time sinapisms were applied to his chest and the calves of his legs, and a blister to the nape of his neck; brandy was given as freely as it was possible, and a turpentine and castor oil enema. For the first hour his condition improved rapidly, but as soon as the stimulating effect of the brandy and sinapisms had passed off he seemed to lapse into his former condition. The symptoms varied in intensity from time to time, until about ten o'clock, when he vomited freely, and from that time rapidly regained his consciousness and fell almost immediately into a natural sleep.

The odor of carbolic acid in the vomited matters was distinctly perceptible, but unfortunately none of the secretions were tested.

When fully recovered the patient said that a very few minutes after the application of the ointment he experienced a peculiar burning prickling sensation over the whole body, and that although he had the greatest desire to micturate he could not pass a single drop of urine. He had no recollection of getting out of bed, and that he was in a faint when the patients found him on the floor there can be little doubt.

As to the disease it improved with marvellous rapidity, and although nothing was afterwards applied but cod liver oil, he was pronounced cured on the sixteenth day after admission, and has had no recurrence of the disease since.

Dr. Fraser, in a few remarks to the students, stated that the case is instructive in two respects: 1st. As regards the danger incurred by the extensive application of carbolic acid to the skin, when the cuticle is removed, as it always is in eczema, leaving the cutaneous absorbents and capillaries exposed, through which it is readily absorbed and produces its known depressing effects upon the circulation through the nervous system. These effects have also been occasionally observed to follow its injection into large abscesses. 2d. As regards its efficiency as a therapeutic remedy in eczema, in which disease, however, judging from its effects in the present case, it should be employed with caution, or to portions only of the diseased surface at a time, and its effects closely watched.

The action of the acid on the urinary organs which has been observed by others was also pointed out, and so was the treatment which succeeded so well in combating its dangerous effects in the present instance.—*Canada Medical Journal.*

A CASE OF RUPTURE OF THE UTERUS. By THOS. F. MOSES, M.D., of Glendale, Ohio.—On the 27th of February I was called to attend in labor Mary P. V., a German woman of small, almost dwarfish stature. An examination disclosed a breech presentation, and as the labor was proceeding normally, and was likely to be tedious, I went away to return after a few hours. On my arrival in the evening, the pains were very frequent and violent. The os was fully dilated, and the breech firmly impacted in the pelvis. The woman showed no signs of exhaustion, and the presenting part continued to advance slowly, so interference was not decided necessary. I was particularly struck with the violence of the pains. All at once, during a pain, the woman uttered a sharp, terrible cry, and complained of intense pain over the lower part of the abdomen. The presenting part immediately receded, and it was evident that rupture of the uterus had occurred. A state of approaching syncope supervening, I did not immediately deliver the child, and the friends of the patient sent for a priest, thinking her dying, which opinion I shared. After receiving the last offices at the hands of the priest she revived a little, and requested me to relieve her, if possible, from her agony. I stated to her the small probability of her recovering, and proceeded at once to deliver, passing my hand through the rent in the anterior wall of the womb, and finding the feet in the abdominal cavity I brought them down separately, and soon completed the delivery. Only the lower part of the body of the child had passed into the abdominal cavity. The rent extended from the fundus quite through the os, and communicated with the bladder. After accomplishing the delivery, I introduced my hand again into the womb to make sure that no loop of intestine was entangled in it, and at the same time removed a clot.

The child, which was a finely formed boy of more than 12 pounds' weight, was of course dead. My only idea now was to make the poor woman as comfortable as possible during the remaining hours of her life, and I administered at once hydrate of chloral in solution, 30 grains, leaving a weaker solution to be given at intervals, in order that its influence might be kept up. Next day I found the abdomen enormously distended and tympanitic; pulse 130, and the face pinched and expressive of great exhaustion. Continued the chloral, and ordered turpentine stupes over the abdomen. Patient dozed most of the time during the day, but was easily roused. The following morning the abdomen was still distended, but less than on the previous day, and the pulse had fallen to 80!

Twenty-four hours later there was a still further improvement, and the abdomen was softer and less painful under pressure. The next day, 72 hours after the delivery of the child, there was such a marked improvement that I considered the patient out of danger, and from that time on she continued to improve so that in three weeks' time she was about her usual avocations, suffering only from debility and the constant dribbling of urine from the fistulous opening in the bladder.

The patient was advised to go to the Cincinnati Hospital and submit to an operation; but, fearing such a procedure, she applied to another practitioner for relief, and was treated for a long time for incontinence of urine. Finding no benefit, as a matter of course, she has finally followed my advice, and is now (July 15) an inmate of St. Mary's Hospital, Cincinnati. The result of the case I have not yet learned.

Two things are worthy of note in this case: recovery after such extensive laceration of the uterus, and the seemingly beneficial effect of the chloral hydrate in subduing extensive peritonitis.—*Medical and Surgical Reporter.*

HYDRATE OF BROMAL.—There is a valuable article by Dr. E. Steinauer, of Berlin, in the last volume of "Virchow's Archiv," on the action of the hydrate of bromal on animals and on man. The experiments were made in the Berlin Pathological Institute, and were under the immediate observation of Liebreich himself. The hydrate of bromal, according to the observations detailed, when administered to animals, undergoes a similar change to that undergone by chloral, being converted by the alkalies of the blood into bromoform. But this change goes on slowly, for at the end of an hour and a half there was found in the blood in addition to bromoform still some undecomposed bromal. The substance is further oxidized and evacuated in the urine as bromide. The symptoms produced by bromal on animals (frogs, rabbits, guinea-pigs) were first a stage of restlessness, followed by imperfect sleep and anæsthesia, and finally dyspnœa and death with or without convulsions. After large doses, both in frogs and rabbits, the heart was found after death relaxed and distended—whereas, after smaller doses, it was contracted. In the former case there is probably direct paralysis of the heart by the bromoform, such as occurs after large doses of chloroform. The preliminary stage of restlessness, which has no equivalent after administration of chloral, is ascribed to the action of the bromal aldehyde itself, the decomposition occurring, as stated above, more slowly than is the case with chloral. The author observed a stage of restlessness, after a hypnotic dose of chloral, in a patient suffering under gout, and he ascribed this to the acid state of the blood preventing the usual decomposition into chloroform. With this view he administered alkalies to the patient, and after a few days the same dose of chloral produced the usual hypnotic effect. Proceeding from this, he applied the same principle in his experiments with bromal. Having injected carbonate of soda subcutaneously in rabbits, he then injected the hydrate of bromal, and found that the stage of restlessness was entirely absent. The author has administered bromal to man in only a few cases. He has found good effects from it in epilepsy, and in soothing the pains of tabes dorsalis. The method of administration which he has ultimately employed is, first, in the morning and at midday a powder containing about 14 grains sodæ bicarb.; then in the evening two to four pills, containing each from ½ grain to 1½ grain of bromal.—*Dublin Medical Press and Circular.*

DYSMENORRHŒA INDUCED BY A PESSARY.—Dr. Robert P. Harris related the history of a case which he had received by letter from a friend. A young girl who had suffered from profuse menorrhagia, unaccompanied by pain or other evidence of uterine disease, had, for some uterine malposition, a pessary introduced. The succeeding menstrual periods became exceedingly painful—the pain and disturbance subsiding, however, upon the removal of the instrument. The dysmenorrhœa induced was of the mechanical expulsive character.

Dr. Harris believed that the symptoms arose from the posterior bar of the instrument (a Hodge pessary) pressing upon the os uteri, thus occluding the calibre of the canal.

Dr. G. Pepper had seen much the same train of symptoms induced as well by the introduction as the withdrawal of pessaries, and in certain cases was inclined to attribute the suffering experienced to the altered position and circulation of the uterus, and could scarcely believe that an instrument exercising sufficient pressure to close the cervical canal or os uteri externum could be worn in the intermenstrual periods without any evidence of disturbance.—*American Journal of Obstetrics.*

Medical Miscellany.

Dr. D. H. Hayden has been appointed one of the Physicians to Out-patients by the Trustees of the Massachusetts General Hospital.

Fiske Fund Prizes.—The Trustees of the Fiske Fund offer the following prizes for the year 1871:—

First. Ununited Fractures; the conditions under which they occur and the most successful method of treatment.

Second. Hydrate of Chloral; its physiological effects and therapeutical uses.

For the best dissertation on each or either of these subjects the Trustees will pay the sum of one hundred dollars. Essays must be sent to the Secretary of the Fiske Fund Trustees, Dr. S. A. Arnold, Providence, R. I., on or before May 1st, 1871, accompanied by a sealed packet containing the author's name, with corresponding motto or device.

Defect of Epiglottis.—Our attention is called to the fact that a case of defect of the epiglottis, additional to those copied from *Virchow's Arch.*, may be found in the Catalogue of the Medical Improvement Society of this city (p. 286). The epiglottis is entirely wanting, except for three little membranous shreds.

New Method of Estimation of Grape Sugar. M. Knapp.—This method is based upon the fact that an alkaline solution of cyanide of mercury is completely reduced to the metallic state by grape sugar. The method is executed as follows:—10 grms. of pure and dry bicyanide of mercury are dissolved in pure distilled water; to this solution are added 100 c. c. of caustic soda solution (sp. gr., 1·145); and, next, as much distilled water is added as will be required to make a bulk of 1000 c. c. A series of experiments made by the author brought to light the fact that 400 milligrms. of cyanide of mercury are, when in alkaline and boiling solution, completely reduced to metal by 100 milligrms. of pure grape sugar. The titration is done as in Fehling's method—40 c. c. of the alkaline cyanide solution are boiled in a porcelain basin; and the sugar solution (not stronger than about half a per cent.) is added until all the mercury is precipitated. In order to test the course of the operation, a single small drop of the fluid is put upon a piece of Swedish filtering paper stretched over the mouth of a small beaker-glass, while the bottom of that glass is covered with rather strong sulphide of ammonium. As long as any cyanide remains undecomposed, a brownish spot will appear. The author states that with a little practice, even 1-10th c. c. of the above dilute sugar solution can be readily estimated.—*Am. Chemist.*

The Siamese Twins.—This renowned pair—called Chang and Eng—who have recently returned from the Old World in the steamer Palmyra, are in a sad plight. One has had an attack of hemiplegia. The other seems to be perfectly well. The question is suggested—Should the paralytic die, what would be the fate of the other, since science has determined that they cannot safely be separated by a surgical operation? They have left this city for their farm in North Carolina.—*N. Y. Medical Record.*

To Correspondents.—Communications accepted.—Case of Traumatic Tetanus treated by the Calabar Bean.—Minnesota as a Resort in Pulmonary Affections.—Hon. Appleton Howe, M.D., an Obituary.

Pamphlets Received.—Transactions of the Medical Society of the State of New Jersey. 1870. Pp. 212.—Medical Progress. An Oration on the forty-seventh Anniversary of the Medical Society of the County of Kings, N. Y. By A. N. Bell, M.D., Physician to Brooklyn City Hospital, &c. &c. Pp. 33.—Transactions of the twenty-fifth Annual Meeting of the Ohio State Medical Society, held at Cleveland, June 14-16, 1870.—Physiological Action of Nitrous Oxide, as shown by Experiments on Man and Lower Animals. By Robert Amory, M.D., Longwood, Brookline, Mass. Boston: James Campbell.

Married,—In this city, 13th inst., Dr. Edward A. Whiston to Miss Emily P. Call, of Charlestown.—In Brandon, Vt., Dr. Frank W. Page to Amelia A., daughter of Dr. Olin G. Dyer, all of Brandon.

Died,—In South Weymouth, Oct. 10th, Hon. Appleton Howe, M.D., aged 78. Obituary in a future number.—In Provincetown, Ms., Sept. 24th, Frederick Howard, M.D., of Randolph, aged 50.

Deaths in eighteen Cities and Towns of Massachusetts for the week ending Oct. 15, 1870.

Cities and towns.	Total.	Prevalent Diseases. Consumption.	Cholera Infantum.	Typhoid Fever.
Boston . . .	122	13	7	5
Charlestown	15	2	3	2
Worcester .	23	2	3	2
Lowell . . .	15	0	1	1
Milford . . .	7	2	2	0
Chelsea . . .	4	0	0	1
Cambridge .	23	4	6	3
Salem	9	2	0	1
Lawrence . .	5	1	1	0
Springfield .	2	1	0	1
Lynn	8	1	0	3
Gloucester .	5	0	1	1
Fitchburg . .	3	0	0	1
Taunton . .	10	3	0	0
Newburyport	10	5	1	1
Somerville . .	4	1	0	1
Fall River .	9	2	2	0
Haverhill . .	1	1	0	0
	275	40	27	23

Boston reports three deaths from congestive fever. From all the above-named places there are reported fifteen deaths from pneumonia (ten of which were in Boston), eleven from dysentery and diarrhœa, and eleven from croup and diphtheria.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Oct. 15th, 122. Males, 63; females, 59. Abscess, 2—accident, 5—apoplexy, 4—inflammation of the bowels, 1—bronchitis, 3—congestion of the brain, 1—disease of the brain, 2—cancrum oris, 1—cerebro-spinal meningitis, 1—cholera infantum, 7—consumption, 13—convulsions, 6—croup, 3—cyanosis, 3—debility, 2—diarrhœa, 3—dropsy, 1—dysentery, 4—diphtheria, 2—epilepsy, 1—erysipelas, 1—congestive fever, 3—scarlet fever, 1—typhoid fever, 5—diabetes mellitus, 1—gastritis, 1—disease of the heart, 1—hæmorrhage, 2—homicide, 1—intemperance, 1—disease of the kidneys, 2—disease of the liver, 2—congestion of the lungs, 2—inflammation of the lungs, 8—marasmus, 6—old age, 4—pleurisy, 2—premature birth, 2—syphilis, 1—tumor, 1—ulcers of intestines, 1—unknown, 8—whooping cough, 1.

Under 5 years of age, 45—between 5 and 20 years, 7—between 20 and 40 years, 34—between 40 and 60 years, 19—above 60 years (one aged 104), 17. Born in the United States, 82—Ireland, 28—other places, 12.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

A HISTORY OF FOUR CASES OF CEREBRO-SPINAL MENINGITIS WHICH OCCURRED IN PROVIDENCE, R. I., IN 1870.

By Stephen S. Keene, M.D.

These four cases all occurred in a dwelling house occupied by one family, and situated in the lower part of the city. The house is seventy years old or more, is two stories high, and covers an area, with its outbuildings, of about fifteen hundred square feet. A steep hill of about 22½ degrees inclination rises towards the east, behind the house, and extends about three hundred feet before it meets any surface drainage. This extent is covered pretty thickly with trees and shrubs, and the soil is clay-loam lying upon hard-pan slate and granite. There is no under-drainage on this side hill.

The house fronts westward—frontage 50 feet—and this is the only side of the house that is freely open to sun light or ventilation. The cellar floor of the house is about ten feet above high-water mark. It has a drain beneath it communicating with the sewer; nevertheless the cellar is represented as having been always wet, the utmost care of the proprietor not sufficing to keep it dry. In front of the house, about six feet distant, and under the curb-stone, is a large opening into the street sewer. Formerly the premises were open freely to sun light and fresh air, but now they are encircled by brick walls, near and distant.

The first case occurred on the 14th of March. A woman, 22 years of age, domestic, who had been in Providence two years, and who had resided in the house six weeks, was seized with uncontrollable vomiting and diarrhœa and general febrile symptoms. She remained sick in the house for one week, and was then conveyed to the Rhode Island Hospital.

For some notes of her case I am indebted to the Hospital Records, from 20th March to 1st April, as follows:—March 20th. Voming and diarrhœa; tongue dry, with a yellowish-brown coat; skin dry and hot; pulse 108; some difficulty in breathing; pain in limbs; anæsthesia of hands and feet; some deafness, ears sensitive to sound; occasional delirium and spasms of masseter muscles; no eruption. Vomiting continued from time to time. Discharged, improved, April 1st.

The first of August, this woman made a visit to the hospital. She then complained of weakness, numbness and pricking in the hands and feet. This was five months after the first attack.

The second case was that of the lady of the house. She had slept on the same floor with the first case, and had been much with her during her illness. This lady was seized on the 6th April, three weeks after the commencement of the first case, and two weeks after that case had been removed to the hospital, with severe headache, nausea, chills, and fever, uncontrollable vomiting and purging; dyspnœa; pulse 125; pricking in hands and feet, followed by paralysis of all the extremities; loss of motion and sensation; motes before the eyes. No paralysis of bladder. Mind intact. On the 1st of May it was considered wise to remove her from the locality. She was accordingly taken to private apartments in the Rhode Island Hospital.

I find noticed in the Hospital Record, 1st May, an eruption like chickenpox over the chest; pulse 120; no albumen in urine.

May 3d.—Pain in arms and legs; spasmodic movements of arms and legs; hyperæsthesia of lower extremities; sleeplessness; temperature 99½; pulse 104. Quinine, belladonna, nux vomica.

May 20th.—Desquamation of cuticle of face; spots on feet. These spots are described as resembling ecchymoses. Pain in limbs; sleeplessness. Morphine injected.

May 24th.—Dyspnœa; sleeplessness; tingling in feet, with coldness; pulse 112; temperature 100; no appetite.

Under a treatment mainly palliative and sustaining, gradual improvement is noted, until August 1st, when patient could feel electricity in both hands; could extend forearms and hands, the lower extremities remaining paralyzed.

I saw this patient 1st of October; she had much improved in motion of hands and arms.

The third case was the house-keeper. She came under my charge, at the Rhode Island Hospital, on the 1st of July. From her I obtained a very clear account of her case. She is remarkably intelligent and observing. She had lived in the house for several years. Six weeks previous to the appearance of the disease, she returned from Nova Scotia, where she had remained two weeks, and had taken care of a sister, sick, as appears from careful questioning, of traumatic erysipelas and pneumonia only. She had nursed the first case here described, and, while nursing the second, on the 24th April, or three weeks after the commencement of this second case, having for several days previously experienced vertigo and general *malaise*, she herself was seized with chills and fever, pain in head, and uncontrollable vomiting. Diarrhœa followed, and continued for two days. Emesis ceased on the fourth day. On the 27th April, or on the third day of her attack, on awaking in the morning, the patient found the whole right side paralyzed completely, the left side incompletely, the extensors more than the flexors. At this period she experienced severe pains along the spine and limbs, with hyperæsthesia of right leg and foot and anæsthesia of left foot and both hands. The pain was particularly severe in back of head and back of neck. The head was drawn backward convulsively, and there was slight opisthotonos on a few occasions. The muscles of the back of the neck were stiff. There was some difficulty in swallowing, but no stiffness of the muscles of the face. There was a sensation of heat in the feet, while they felt cold to the touch. There were crawling and pricking sensations, and numbness in the limbs. These last three phenomena were first felt in the right heel, afterwards in the left foot and in both hands. There were no convulsions, but slight convulsive movements of right arm and leg occasionally. There was headache, dizziness and sleeplessness, and sometimes stupor. The senses of taste and smell were gone. The eyes were sensitive to light; the patient was unable to read, and motes and sparks floated before the sight. The breathing was labored, sometimes painful. There was retention of urine and constipation. There was no eruption.

This patient was conveyed to the Rhode Island Hospital on the 1st of May. According to the Hospital Record, she continued to improve from first of May to first of July, suffering a good deal from pain in back and limbs, sleeplessness, nausea and hyperæsthesia. Quinine, nux vomica, belladonna, bromide of potassium, chloral, injections of morphine, ether and electricity were all tried.

I will now give the description of the actual state of this patient on the 1st of July (being the commencement of my term of service in the Rhode Island Hospital), copied from my hospital notes.

July 1st, 1870. Female, age 30; single; house-keeper; born in Nova Scotia; in Providence four years.

Actual State.—Countenance nearly natural; some expression of suffering. No emaciation. Mind clear, intact; intelligence remarkably good; gives a clear account of her case. Temperature, to touch normal throughout; in axillæ, 98° to 100. A few papules of lichen on feet; some herpes on face. Left extremities weak; nothing else abnormal on left side. Right side: Anæsthesia throughout—of scalp, of face, neck, both sides of tongue, and of both right extremities. Hyperæsthesia of right limbs only, particularly of right leg and foot when pain in back is great. Movements of tongue and face uninterrupted. Some motion of hand and forearm. Slight movement of fingers—of flexion, not of extension; partial contraction of flexors of fingers and toes; forced movement of fingers painful. Right hand and foot have a sensation of heat, while they feel cool to the hand of the observer. Slight tumefaction of right hand and fingers. Pricking, formication and pains along right extremities. Right leg: Very slight power of extension of thigh; very slight movement of toes. Spasmodic movements of right arm and leg occasionally. Electro-sensibility and electro-contractility do not exist below right elbow and knee. Head: Pain in back part of head actually; in frontal region occasionally; no dizziness; sleep not good—two to four hours with anodyne. Sense of taste has never returned. Sense of smell increased. Ears less sensitive to sound; some deafness. Eyes not sensitive to light; no dilatation of pupils; can read a little; still sees motes and sparks. Spine: Great pain, with intermissions, along spine and extremities, particularly in lower extremities; some pain on pressure from summit to lumbar region, most remarkable along right side of spine. Patient complains of the sensation of a bar across the chest. Respiration is at times irregular and labored. Lungs and heart normal. Pulse 80, normal. Mouth and throat normal; swallowing uninterrupted. No relish for food; digestion medium. Constipation. Retention of urine; urine of normal quantity; contains some traces of epithelium and lithates; no albumen. Uterine functions normal.

Diagnosis.—The history of the case, its endemic character, two similar cases having already occurred in the same locality, followed by a fourth, the patient experiencing, at the commencement, vertigo, general *malaise,* chills and fever, pains in the head, severe pains in back of neck, with contraction of muscles of back of neck, opisthotonos, uncontrollable vomiting, intense pains along the spine, extending to lower extremities, with paralysis, hyperæsthesia and anæsthesia, spasmodic movements of extremities, paralysis of bladder, increased sensitiveness of sight and hearing, labored respiration, present a train of symptoms characteristic of what has been described as simple cerebro-spinal meningitis.

I found I had to deal with the sequelæ of cerebro-spinal meningitis, or that disease in its chronic form. I applied ice, cups and issues to the spine, ordered the utmost quiet and repose, disturbing the stomach as little as possible with remedies. I gave as much nourishment as the digestive organs would bear, and relieved pain and suffering by such means as art suggested. Injections of morphine, and electricity were most useful.

I kept daily notes of this case. The changes were few and the amendment slow. Nausea and vomiting occurred from time to time, and pain along the spine and extremities, bringing with it the spasmodic movements and hyperæsthesia of right arm and leg, and sleeplessness.

July 14th.—Patient turned on right side spontaneously for first time, rotated right forearm, and began to taste her food more.

By the first of August she had pronated right hand, adducted and abducted right foot, slept without anodyne, and had some appetite.

Aug. 14th.—Felt electricity along median nerve of right arm for first time; can supinate right hand perfectly; can pronate it less perfectly; considerable muscular power in flexor muscles of right arm. Slept well. Nothing else new.

According to notes, the pains returned from time to time, with convulsive movements of right arm and leg, with little or no nausea.

Sept. 7th.—Free from pain. Good night. No nausea. Good appetite; relishes her food. Countenance natural. Patient thinks her state much improved. Pricking sensation in limbs; formication felt in right leg several days ago. Can flex right thigh a little, and move leg; can flex and extend right foot and toes slightly. More movement of right arm and hand; can pronate right hand and extend fingers. Anæsthesia of right arm, hand, leg and foot. Feels electricity in right elbow and wrist. Anæsthesia of right side of scalp, face and both sides of tongue. Ears less sensitive to sound; less deafness. Sight good; can read for a longer time; motes and sparks less frequent; pupils normal. No hyperæsthesia actually present; it returns with intense pain. Convulsive movements not so frequent. Breathing not affected. Heart and lungs normal. Pulse 80. The patient has had no bed-sores. No emaciation. Retention of urine and constipation still continue. Uterine functions normal. Nothing else remarkable.

There was occasional increase of pain, with its accompaniments, nausea, convulsive movements and hyperæsthesia of right limbs, until Sept. 18th, when patient had more motion of pronation and supination of right arm; flexed and extended right hand and fingers more easily, and grasped my hand with considerable force. Could flex the right thigh, adduct and abduct right foot, flex and extend right foot a little, felt hypodermic needle in right leg, and could stand on left leg.

To complete this history, I must mention the fourth case, that of the son, aged 12. He was taken on the 1st of May with vomiting, diarrhœa and fever; was sick three days, and recovered.

These were the only cases observed in Providence at that time or subsequently.

With regard to the cause, suspecting poison, careful chemical examination was made of the water and water-pipes, without result.

So far as I have been able to ascertain, this is the first time that cerebro-spinal meningitis has been observed in Providence.

The first and only record we have of its appearance in Rhode Island was in 1863, when it prevailed in the Naval School at Newport.

* * *

Prof. John T. Darby, of the University of South Carolina, recommends the liquid silicate of potash, in place of plaster of Paris, starch, &c., for immovable surgical dressings.

IODIDE OF POTASSIUM IN BRONCHIAL ASTHMA.

By E. P. Hurd, M.D., Newburyport, Mass.

Iodide of Potassium in the treatment of Bronchial Asthma is a remedy which has been long used, and yet its importance has not, I think, been rated sufficiently high. It appears to me to be only useful in those chronic cases, distinguished by wheezing, dry râles, little or no expectoration, where the dyspnœa seems consequent on a congested and thickened condition of the air tubes. In one case, of this description, which has recently come under my observation, the relief was most marked, and the recovery rapid, by the use of Iodide of Potassium in ten gr. doses three times a day. The patient—a middle-aged man—had been confined to the house for a year, unable to do any work, much of the time debarred the *dorsal decubitus*, and becoming livid, emaciated and anasarcous. Lobelia, antimony, digitalis, prussic acid, the whole round of expectorants and counter-irritants had been tried without relief. The Iodide of Potassium "worked like a charm," removing the dyspnœa and anasarca, and restoring appetite and vigor; but after a month of comparative immunity from the disease, during which time my patient attempted resumption of his occupation, exposure to cold brought back the malady, with all its horrors. The iodide now fails to give relief.

The commencement of this case seemed to promise excellent results; but now I find all remedies of ephemeral benefit. The case has certainly given me a hint not to report a cure until I am satisfied of its permanence.

DEFECTS OF OCULAR REFRACTION, &c.

(Continued from page 166.)

Lecture II. Part I.—*Prisms. Accommodation.*

You will find in the recent works on ophthalmology that use is made of prisms in investigating and treating diseases of the eye. By a prism, is meant a wedge-shaped piece of glass, or a piece of glass bounded in part by two plane surfaces inclined to each other; the angle of the two surfaces being called the refracting angle of the prism.

We must therefore glance at the refraction of light by prisms. In the first place, they displace the image laterally, or in a direction towards the angle of the prism, and give a colored appearance to the margins of the image. It will be remembered that the lateral deviation varies in amount with different positions of the prism. It is also to be mentioned that unless the prism is held in the position corresponding to the minimum deviation, a homo-centric incident pencil becomes astigmatic after refraction. The distance of the virtual image from the prism remains the same as that of the object for the position of minimum deviation, but not for all positions. Weak prisms, the only ones which can be used, should accordingly be placed nearly perpendicular to the direction of the object. Carter tells us, in the preface to his translation of "Scheffler's Theory of Ocular Defects," that "It is found in practice that the difficulties arising from aberration and dispersion become insuperable except by achromatic prisms when an angular measure of more than 8° is attained."

It follows that weak prisms, smaller than eight degrees refracting angle, should alone be used to remedy defects of direction. In this case, when the prism is weak, the angle of the lateral deviation of the image is about one-half the refracting angle of the prism; then we can only directly correct by a prism a deviation of four degrees.

If the optic axis deviates four degrees, the centre of the cornea will deviate along the edge of the lid about three-quarters of a millimetre. This is, then, the greatest deviation which can be directly corrected by a prism, that is, a little less than half a line, two millimetres being about equal to one line; but yet we must remember that if only a certain part of the deviation were corrected, the eye might thereby be incited to move so as itself to correct the rest.

The question as to the prism required might present itself as follows: conceive a straight line extending from the root of the nose directly forward in the median plane. What prism placed before the eye with the angle outwards is required to give to the ray from a point in this line at the distance m inches the direction as if it came from a farther point in the same line at the distance n inches? If l is the focal distance in inches of the convex lens which would bend rays from the distance m to directions as if from the distance n, then the refracting angle of the required prism expressed in degrees is approximatively 135 divided by l.

This prism in combination with the lens whose focal distance is l, constitutes the orthoscopic glass of Scheffler.

Carter gives a table of the prisms required for orthoscopic combination with the respective lenses. In copying the table, I have taken the nearest whole number in the case of the focal distance, and the nearest half-degree in the case of the prism. It may be seen that the value of the prism agrees very nearly with the formula, 135 divided by *l*.

Focal Length in Paris Inches.	Prism for Orthoscopic Combination.
89	1½ degrees.
44	3 "
30	4½ "
22	6 "
18	7½ "
15	9 "

In the last lecture, ocular refraction was looked upon as a case of geometrical optics. In the present, we have to consider it as a physiological process, and from this point of view I shall ask your attention to the distinction between refraction and accommodation, and to the relation of the refractive power to the mutual convergence of the optic axes, or to what is called *relative accommodation*. We shall then look in a general way at the action of glasses when used to assist vision, and at the theories according to which glasses might be selected, concluding the lecture with a word on the setting of glasses. With regard to the accommodation I desire to bring to your notice an extremely simple proposition, and yet one which will facilitate the further understanding of the subject; it is this, that the nearer to the eye the point from which the rays emanate, the more refractive action is required to bring them to a focus on the retina. It may also be noticed that the refractive action necessary to bring the rays from a given point to a focus on the retina may be divided into two parts: first, that which would suffice to give them directions as if they proceeded from some point farther off, and then that which would bring these last to a focus on the retina.

As we are able to see distinctly at different distances, the eye must be able to change its refractive power.

Suppose that when the refractive power of an eye is at its minimum, the eye is then optically adjusted for a certain point *r*, that is, the rays from this point come to a focus on the retina: this point *r* is the *far-point*; a point farther off is not seen distinctly.

The minimum of refractive power of a given eye corresponding to the far-point is called by Donders specially *the refraction* of the eye, and its amount may be indicated in any particular case by the position of the far-point.

When the eye adjusts itself optically for a point nearer than its far-point, it must add to itself refractive power over what it has when adapted for its far-point. This addition of refractive power is called *accommodation*. When it has added all that it can, it is then optically adjusted or *accommodated* for its *near-point*. The whole amount it can thus add to itself is its total accommodation; this is the difference in refractive power between the eye when adapted for its far-point and the eye when adapted for its near-point.

This difference may be measured by an equivalent glass lens in the air, or represented by the position and extent of the line between the far-point and the near-point.

We might also measure it by the difference in refractive power of the crystalline lens in its two states of maximum and of minimum power, as the accommodation is brought about by a change in the convexity of the crystalline lens, which becomes more convex especially on its anterior surface during optical adjustment for near objects. This is shown by a study of the image formed by reflection from its anterior surface. This change is considered to be a consequence of the contraction of the ciliary muscle, known also as the tensor choroidiæ.

We might also inquire what lens in the vitreous just behind the crystalline would produce on the rays the effect of the accommodation; or what lens in the aqueous just in front of the anterior surface of the crystalline would produce the same effect.

It should likewise be remembered that a given lens when placed in the vitreous, or in the aqueous, both of which have about the same index of refraction, nearly $\frac{4}{3}$, would not have the same focal distance as when placed in the air, and also that according as our auxiliary lens to produce the effect equivalent to that of the accommodation, is supposed before the eye, in the aqueous, or in the vitreous, it might be different just as the lens to bring parallel rays to a focus at a given point would be different according to its location.

We adopt in practice the first measure, equally applicable whether more or less of the accommodation is used. If we suppose just in front of the cornea a thin lens of focal distance A when in the air, and of such power as to give to rays from a given point directions as if they came from the far-point, we evidently get an increment of refractive power equivalent to the accommodation required for the given point. The focal distance of such a lens is given by the formula

$$\frac{1}{A} = \frac{1}{p} - \frac{1}{r} \qquad [4]$$

the distances p and r respectively of the given point and of the far-point being counted from the supposed auxiliary lens which is supposed close to the cornea. Donders counts the distances p and r, from the combined nodal points of the eye. As these are only about seven millimetres behind the cornea, only a slight difference in the value of $\frac{1}{A}$ will result from this way of counting the distances.

This conception, however, of locating the supposed thin lens representing the accommodation in the nodal point of the eye is less simple, because the lens would not then be in the air as the use of the formula supposes. Donders proposes three ways of explaining this difficulty, which, indeed, render the conception allowable, though less simple than that of a thin lens supposed just in front of the cornea.

Addend.—After the word *system*, p. 248, 1st column, 14th line, add "or have directions as if proceeding from this point."

Reports of Medical Societies.

MEETING OF THE COUNCILLORS OF THE MASSACHUSETTS MEDICAL SOCIETY.

THE Councillors of the Massachusetts Medical Society held their stated meeting in Boston, on Wednesday, October 5th, 1870. The Vice President, Dr. Hunt, in the chair.

It was announced that Dr. Asa T. Newhall, of Lynn, had been expelled by a Board of Trial, for alleged criminal abortion.

Several recommendations of the Committee on Resignations were passed. Their recommendation that the name of Dr. J. A. Tilton, of Newburyport, who had failed to respond to the Treasurer, be dropped from the rolls of the Society, was accepted.

The Secretary read the vote of the Society, passed at the Annual Meeting, to strike out a paragraph of Art. I. of the By-Laws, relative to the admission of medical graduates of Harvard University without examination.

Prof. H. J. Bigelow, of Harvard University, said that the paragraph in question had its origin in an old State Law, enacted for the benefit of the Society, not for that of the College; that the Medical Faculty of the University never had any interest in the matter, and he believed that some of them scarcely knew of its existence. This paragraph in the Society's By-Laws was understood to be rendered inoperative by the repeal of the State Law alluded to, and by the passing of the Act of 1859,* which required *all* candidates for membership to be examined by the Censors. He would therefore move that the paragraph in question be stricken from the By-Laws of the Society.

Prof. Calvin Ellis, Dean of the Faculty, seconded the motion. Voted, *nem. con.*

The Committee appointed at the last meeting of the Councillors, to whom was referred the Report of the Delegates to the American Medical Association; the counter statements of Dr. John L. Sullivan, of Malden, and others; together with any other papers pertaining to the matter, made a report through their Chairman:—

I. That they found the statements in the Report referred to them substantially correct; that objections to the admission to the American Medical Association of the Delegates of the Massachusetts Medical Society were presented by Dr. H. R. Storer, and Dr. J. L. Sullivan, *without proper notice having been given by them of their intention to present said objections.*

II. That in their opinion, in view of the fact that Drs. Storer and Sullivan were members of the Society, their omission, apparently premeditated, to give such notice was, to say the least, an act of discourtesy which deserves censure.

III. The Committee further reported that the action of the American Medical Association, in effect imposing conditions upon the rights of this Society, was ill considered and unwarranted; and they advised, before again sending delegates, a committee be appointed to make a formal representation to the American Medical Association at its next Annual Meeting, with a view of procuring a reconsideration of its action in the premises.

IV. The Committee recommended that no Delegates from the Society be sent to the next Annual Meeting of the American Medical Association.

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* Act of the State passed March 5th, 1859, viz.:—"No person shall become a member of the Massachusetts Medical Society, except upon examination by the Censors of said Society; and any person of good moral character, found to possess the qualifications prescribed by the rules and regulations of said Society, shall be admitted a Fellow of said Society."—Chap. 82, Mass. Laws, 1859.

Voted, that these several sections be taken up separately.

A free discussion ensued, in the course of which Dr. Sullivan pleaded that there had been no intention of discourtesy, or to surprise the Society's delegates. Dr. Millet argued that the members making the protest were personally responsible, as shown by documents from the Secretary of the American Medical Association; Dr. Savory described the unusual procedure of these members at Washington; Dr. Chapin expressed grief and astonishment that any member should, especially in such a manner, accuse the Massachusetts Medical Society of favoring quackery in any shape, especially as it had done so much and was endeavoring to do so much to repress it; Dr. D. H. Storer defended the Society, emphatically asserting that it had, in its corporate capacity, as well as by its individual members also, himself included, at much sacrifice of labor and means, done everything possible to put down charlatanism of every sort; declaring further, that the Society had long ago shut its doors against admission of all irregulars; but there was no power under Heaven to restrain men to a prescribed practice when they had once been admitted.

Nos. I., II. and IV. of the Resolutions were then adopted by the Councillors without a negative vote; No. III. was adopted by a large majority—those opposed declaring their wish that no notice be taken of the Association, except by omitting to send delegates in future.

Voted, that the Committee on the Protest constitute a committee to represent the matter contained in Resolution III. to the American Medical Association.

The remainder of the Committee's report, containing a carefully prepared Digest of the Acts of the Legislature relating to the admission of members into the Massachusetts Medical Society, and other matters pertaining thereunto, was referred to the Committee on Publications, with power to print such portions thereof as they may think useful to the Society at large.

Voted, on motion of Dr. W. W. Comstock, of Middleborough, that the Committee on Publications be requested to see that no obituary notices be published in the Society's Communications which are not furnished by some responsible member of the Society.

Adjourned.

MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY.

CHARLES E. VAUGHAN, M.D., SECRETARY.

The semi-annual meeting was held at Waltham, October 12th.

In accordance with the expressed wish of the members, Dr. Willis reported the proceedings of the Councillors of the Maschusetts Medical Society at their recent meeting, including their action upon the difficulty at the late meeting of the American Medical Association at Washington.

The change in the rules for admission to the Massachusetts Medical Society was also reported.

Dr. C. E. Hosmer, of Waltham, read a paper upon hot-air furnaces, and other means of warming buildings. He thought that in heating, direct radiation is preferable to connection. If a room is warmed by air heated at a distant centre of heat, a higher temperature is required than is the case when the heat comes directly from a centre of radiation in the room. Increase of temperature implies increase of capacity for moisture, with the attendant evils. The transition of gases through heated cast-iron stoves was also mentioned as another serious evil connected with the hot-air furnace. The conclusion arrived at was, that the steam apparatus, with the radiators in the room to be heated, was the best available means of heating.

The paper elicited some discussion. Dr. Warren remarked that the absence of ventilation by the introduction of fresh air from without, is a serious objection to the direct-radiation form of steam apparatus. This is obviated by the form which carries air from without, over radiators in the basement. Hot water was spoken of as better than steam for heating, since it does not necessitate so high a temperature.

Dr. Stone, of Newton Corner, read a paper upon embolism and thrombosis, defining and describing the two at some length.

Drs. Willis and Hunt reported cases of embolism.

Dr. Coggswell reported a case of a man of 45, in whom the anterior fontanelle and the sagittal suture were open, so that the pulsations of the brain were felt. He was subject to severe headaches, which his wife treated successfully by approximating the edges of the parietal bones by strong manual pressure. When seen, the patient had just had an epileptic attack, but had never suffered from such attacks previously.

Dr. C. E. Hosmer mentioned an instance of tolerance of bromide of ammonium. The patient, an epileptic, through misunderstanding of directions, took 160 grains daily for the space of seven months. There was no recurrence of the attacks during this time, until very unusual fatigue in the hay-field was followed by a single fit.

Dr. Sullivan re-introduced the subject of the recent action of the Councillors, and offered a motion protesting against the same as unauthorized. This was referred to a committee consisting of Drs. L. R. Stone, C. E. Vaughan and O. E. Hunt, to report at the annual meeting.

The Censors reported the admission of Drs. C. W. Marsters, C. B. Shute and W. W. Dow.

Bibliographical Notices.

Archives of Ophthalmology and Otology. Vol. I. No. 2. New York: William Wood & Co. For sale by James Campbell, Boston.

The second number of this valuable work comes to us in the form of a handsome octavo of 256 pages, illustrated by numerous wood-cuts and four lithographic plates. The letter press is large and clear, the subject matter well selected, and of interest not only to special practitioners, but to the profession at large.

The simultaneous publication, in two languages, and in different continents, of a work devoted to the interests of two important branches of medical science, is no slight labor, and requires the expenditure of much time and energy for its successful accomplishment.

The contributions, as received by the editors in New York and Heidelberg, are exchanged and translated for the German and English editions. The lithographic plates are prepared at the establishment of C. F. Müller, in Carlsruhe, for both editions, and the transfers made as rapidly as possible. That neither time nor energy have been spared in the editorial and administrative department, is shown by the character of the present number.

The principal contributors are Prof. Knapp and Prof. Moos, the English and German editors respectively Of the twenty-five papers composing the publication, ten are devoted to subjects connected with Otology. Fourteen of the articles are by American, and eleven by German writers.

We shall take an early opportunity to give this work a more extended notice.

C. J. B.

Snuff-taking; its Utility in preventing Bronchitis, Consumption, &c. By John Murray, M.D., &c. London: John Churchill & Sons. 1870.

We are irresistibly induced, on reading the title of this volume, to quote the no less striking one of Mr. Parton, "Does it pay to Smoke?" and while we might join heartily in the arguments of Mr. Fiske, which induced him to write his rejoinder, "It does pay to Smoke," we cannot help rebelling against a prophylactic, so disagreeable to many sensitive persons as snuff-taking, to ward off diseases of the pulmonary organs. The fragrant odor of the burning weed we can well appreciate, *after office hours*, but we feel disposed to reluct at the use of tobacco in the form of snuff, even with the promised boon of freedom from bronchitis and consumption.

However, speaking seriously, the somewhat amusing and exhaustive paper of Dr. Murray, read before the British Medical Association, deserves notice for the suggestion which it makes to the profession. One of our brethren in Boston ascribes his freedom from a catarrhal trouble, which he had for years, to his recent habit of exhaling the smoke of his cigar by the nasal passages; and why may not the proposition of Dr. Murray have a similar truth concealed in it? We cannot give our readers any results from an employment of this method of medication by the nasal passages, but we should be glad to see the suggestion tried.

A Handbook of Medical Microscopy. By Joseph G. Richardson, M.D., Microscopist to the Pennsylvania Hospital, &c. Philadelphia: J. B. Lippincott & Co. 1871. Pp. 333.

This book owes its origin to a belief entertained by the author that there exist in the profession an increasing sense of the importance of microscopic research and a growing desire to render its advantages available in the routine of daily practice. It is a thoroughly practical handbook, well and wisely written, and, after a careful examination, appears to be a good work to put into the hands of students and practitioners, in place of the more expensive foreign books.

The first two chapters are devoted to instruments and manipulation. He describes most of the American microscopes, alluding especially, and with the most praise, to the Woodward microscope, Grunow's, Tolles's and Bentmayer's. In the matter of manipulation, we do not remember having seen the formula of "Hunt's cement," as it is called, which is extensively used for sealing the edges of the thin glass in the Army Medical Museum, and therefore we introduce it. Dr. Woodward states that it is prepared by evaporating Canada Balsam to a solid consistence, dissolving it in an equal bulk of benzole, and then thickening it to about the density of cream, with white lead or zinc, ground in oil.

The larger part of the book is devoted to the examination of the secretions and excretions of the body, in health and in disease, the method of searching for parasitic organisms of the integuments and the muscles, medico-legal investigations, and the examinations of morbid growths. It is arranged very thoroughly upon a sort of natural system, and, as far as practicable, in accordance with the so-called dichotomous plan, having therefore the great advantage of presenting problems of diagnosis as they occur in actual practice. By this method, while different secretions and excretions form a basis of classification, classes are divided, according to the naked-eye characteristics, into orders, after which the microscopic appearances point out the generic and specific peculiarities that serve to distinguish the special malady existing, and so conduce to those great ends of microscopic study, the more accurate diagnosis, prognosis, and treatment of disease; in fact, the carefully drawn deductions which, throughout the book, Dr. Richardson draws from the appearances seen, and the advice given under supposed circumstances, give a charm and value to the perusal of it. We mention especially his chapter on the examination of pus and mucus, of the blood, of the sputum, &c., all of which are strictly in accordance with modern theories, and are safe and reliable authorities. An excellent index closes the book.

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*Hypertrophy of the Muscular Walls of the Minute Arteries in Cases of Bright's Disease.** By Geo. Johnson, M.D., F.R.C.P., President of the Metropolitan Counties Branch of the British Medical Association.

In a small pamphlet of seven pages the author briefly states his views on the causes and consequences of this species of hypertrophy. The following is an abstract.

The walls of the larger arteries are mainly composed of yellow elastic tissue, which serves to receive, transmit and equalize the cardiac impulse. The walls of the minute arteries bordering on the capillaries, on the contrary, are composed principally of muscular fibres, transverse and longitudinal, and, subject to the intelligence of the vaso-motor nerves acting in behalf of the parts to be supplied, serve, like stop-cocks, to *govern* the flow of blood to the various organs and tissues.

"In consequence of degeneration of the kidney, the blood is morbidly changed. * * * * It is, therefore, more or less unsuited to nourish the tissues—more or less noxious to them. The minute arteries throughout the body resist the passage of this abnormal blood. The left ventricle, therefore, makes an increased effort to drive on this blood. The result of this antagonism of forces is, that the muscular walls of the arteries, and those of the left ventricle of the heart, become simultaneously and in an equal degree hypertrophied. The persistent overaction of the muscular tissue, both cardiac and arterial, is found registered after death in a conspicuous and unmistakable hypertrophy."

"We have found this hypertrophy of the minute arteries in various tissues (kidney, pia mater, skin, intestines, muscles, and probably elsewhere) associated with hypertrophy of the left ventricle in every case that we have examined, amounting now to more than a dozen."

Dr. Johnson mentions, in conclusion, some of the phenomena of chronic Bright's disease, which, he says, are explained by the facts to which he has referred.

"1. The hypertrophy of the left ventricle is explained. That which Dr. Bright long ago surmised is now a demonstrated fact. There *is* an impediment to the passage of the altered blood 'through the distant subdivisions of the vascular system;' hence arise greater action of the heart, and hypertrophy of its walls.

"2. The full, hard, radial pulse, and the increased pressure on the arterial walls indicated by the sphygmograph, are explained by the co-existence of excessive cardiac force, with an equal, or more than equal, excess of arterial resistance.

"3. The excessive dryness of the skin, and the difficulty of exciting diaphoresis, even by the hot-air bath, are accounted for by overaction of the hypertrophied subcutaneous arteries resisting the relaxing effect of external warmth, which has so powerful an influence upon the healthy skin.

"4. One result of excessive resistance

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* Read at an ordinary meeting of the Metropolitan Counties Branch of the British Medical Association, March 30th, 1870.

throughout the whole systemic arterial system must be to impede the passage of blood from the venous system through the lungs, and thus to favor the occurrence of dropsy by an influence not unlike that of a defective valve on the left side of the heart. The influence of arterial resistance in retarding the circulation will mainly depend upon the extent to which this is counteracted by hypertrophy of the left ventricle of the heart.

"5. Lastly, the not infrequent occurrence of cerebral hæmorrhage is explained. While the minute cerebral arteries resist the passage of the blood, the strong left ventricle is forcibly driving it onwards. In the struggle between the two contending forces an artery gives way, and the result is cerebral hæmorrhage and apoplexy."

C. W. S.

The American Dispensatory. By John King, M.D., Professor of Obstetrics and Diseases of Women and Children in the Eclectic Medical Institute of Cincinnati, &c. &c. Eighth Edition, completely revised and largely re-written. Cincinnati: Wilstach, Baldwin & Co.

We have received from the publishers the large and compendious work of Dr. King; it is, in fact, the Dispensatory used by the so-called Eclectic school of practitioners, and undoubtedly contains very much which will be of use to them. To say that there are very many things in the work we cannot believe, would be as true as the assertion which we freely make that we have no faith or reliance in the school which it represents; but that it contains very much which is really of value, especially in the department of botanical therapeutics, is a fact of which we are assured. To those regular practitioners who employ many of the alkaloids it is of value, inasmuch as they are quite fully treated therein.

We let the publishers speak for themselves in their description of the work:—

"Although many valuable Dispensatories have been presented to the physicians and pharmaceutists of this country and Europe, they have all, except the former editions of this work, been confined to an account of those remedies only which have been recognized and employed by that class of physicians termed "Old School" or "Allopathic;" ignoring all the recent discoveries and improvements of Medical Reformers, and have, therefore, only partially answered the purposes of the large number of progressive medical men found in these countries. In the present Dispensatory, not only are the known medicinal plants described, as well as their numerous pharmaceutical compounds, alkalies, resinoids, oleo-resins, &c., but likewise all those poisonous mineral agents so strongly objected to by the New School physicians; thus forming a volume full and complete in itself. There is no other work, in Europe or America, containing such completeness of information. To render the work practically useful to the physician and pharmaceutist, and to bring it up to the discoveries and improvements in medical science of the present day, neither pains nor expense have been spared."

The Medical Herbarium; a Collection of Dried Samples of Medicinal Plants. By T. F. Allen, M.D. New York. Part I.

We have received the first part of the above work. It contains ten specimens, viz., Eupatorium Purpureum, Asclepias Incarnata, Polygala Senega, Baptisia Tinctoria, Aletris Farinosa, Ptelea Trifoliata, Phytolacca Decandra, Lobelia Inflata, Ustilago Maydis, and Cicuta Maculata. The specimens are neatly pressed, mounted on white paper, and protected by corrosive sublimate. A printed label, attached to each plate, gives the botanical and common name of each specimen and a few of its botanical characteristics. Ten parts are to be issued, which, if completed, will make a collection of one hundred specimens. The physician, pharmaceutist or lecturer will doubtless find many specimens in this collection which he would be glad to include in his museum; yet if only one hundred specimens are to be collected, we should not ourselves include in so limited a collection plants like ptelea trifoliata, or the ustilago maydis, which is generally known by the homelier name of corn smut.

E. H. C.

Chloroform to detect Feigned Insanity.—A German medical journal mentions a case which happened in New York, and which we do not remember to have seen published at home. A man who had committed several murders and who appeared to be insane, was put under the influence of chloroform. As he began to revive, he answered questions with truth and reason. As soon as complete consciousness was restored, he saw that he betrayed himself, and made a full confession.—*Pacific Med. and Surg. Journal.*

Medical and Surgical Journal.

BOSTON: THURSDAY, OCTOBER 27, 1870.

REGENERATION OF BONE AFTER SUB-PERIOSTEAL RESECTION OF JOINTS.

M. **OLLIER**, who presented the following cases to the Academy of Sciences not long since, is the author of a valuable and exhaustive work on resection of bones, with special reference to the sub-periosteal operation. He justly concludes that these post-mortem observations are confirmatory of the eligibility of his method of operating, and of his experimental deductions.

"The two patients whose autopsy permitted me to verify these propositions died, one eighteen months, and the other a year, after resection of the elbow; the first was nineteen years old, and the second forty-nine. In the younger subject, the reproduction of the bone about the joint was very complete and regular; not only was the articulation restored by the approximation of the bony surfaces, but there was also restitution of the processes—the condyles of the humerus and the olecranon.

"Eight months after the operation, the patient was in good condition, both locally and in general. There remained only a small, fistulous opening, which occasionally gave exit to a little serous discharge. The movements of extension and flexion, of pronation and supination, were re-established, and were daily becoming more perfect. Phthisis manifested itself, unfortunately, and from that time to the end of his life, the patient suffered greatly. The hip-joint and the shoulder, up to that period perfectly well, were attacked with fungous tumors, and became carious; the elbow, which had been resected, underwent similar changes, and suppurated till the end of life.

"At the autopsy, the inferior extremity of the humerus was the part most regularly restored; viewed on its anterior aspect, it presented a triangular outline, its apex corresponding with the diaphysis of the bone, and its angles terminating in prominent projections, representing the epicondyle and epitrochlea; the base corresponded with the articular interline. A careful section of the bone demonstrated the repair of the condyles. Although the new portion appeared at first glance perfectly homogeneous with the original part, it could be distinguished by its roughened aspect, and by the absence of the smooth, compact tissue which covers normal bones.

"The ulna terminated in an olecranon of new growth, which formed with the original bone an obtuse angle, opening anteriorly in such a manner that the boundaries between the old part and the new were easily made out. This olecranon thus formed a sort of hook which, placed behind and between the new tuberosities, locked into the humerus and insured firmness in the joint.

"Just within the point of articulation of the olecranon and the posterior aspect of the humerus was found, on the new internal condyle, a well defined depression lodging the ulnar nerve in its normal position. The radius terminated in an enlargement formed of new bone, but without the cup-shaped depression.

"All these new growths were covered by a thick periosteum. The different muscular insertions, which had been detached at the time of the operation, were restored in their normal relations. The muscles themselves were pale and atrophied on account of long disuse. Between the two condyles of the humerus was a tough, fibrous mass, covered anteriorly by fat. The articular surfaces were not yet enclosed in their cartilages. The return of suppuration in the elbow had not only prevented the completion of the reparatory processes, but had occasioned the various changes which belong to chronic inflammation of the joints.

"The second patient had died of albuminuria, a year after the operation. In spite of the unfavorable conditions under which he lived, his health having been satisfactory only from the second to the sixth month after the resection, I found at the side of the humerus two projecting, thickened growths of bone, one directed inwards and downwards, and the other outwards and downwards, so as to form a sort of socket, preventing all lateral motion of the ulna and radius. The ulnar nerve was imbedded in an ostro-fibrous depression behind the internal condyle. The olecranon, of irregular shape, gave attachment to the tendon of the triceps muscle by a series of detached bony nuclei.

"The reproduction of the large condyles appeared in this case especially interesting, on account of the age of the patient, previous investigations having tended to prove that complete repair is not to be expected in the adult.

"All the muscular insertions which had been detached in the operation were found rëestablished in their normal relations on the new growth of bone, as in the first instance.

"These results are confirmatory of the utility of the operation which aims at the entire preservation of the periosteo-capsular sheath of the joint, including all the fibrous tissues, the periosteum, tendons, and ligaments which cover the ends of the bones, and limit the articulation. The periosteum serves directly in the repair of the extremities of the bones, and, in cases in which this restoration is imperfect on account of the age of the patient, the preservation of the media of union and of the power of motion still furnishes a useful joint, the muscles continuing to act on their respective bones through the intervention of the periosteum."

A STUDENTS' NUMBER.

We call attention once more to the fact that our next number of the Journal will be devoted entirely to the Medical Class, and will contain, in addition to the address of Dr. J. C. White at the opening of the Winter Course of Lectures, sound advice from other members of the profession, and such items of information as may be useful to students, as well as practitioners, for the ensuing winter. We hope to make it both interesting and useful.

From the report of the annual meeting of the British Medical Association, in the Journal of that organization for Oct. 1st, we copy the following :—

On Strangulation of the Uterus. By Graily Hewitt, M.D.—"Strangulation of the uterus" is that condition of the organ in which the circulation is mechanically and forcibly interfered with, the result being acute congestion of the body of the uterus and various secondary effects. This strangulation is present when the uterus is forcibly bent upon itself, most markedly when it is bent backwards. It is a marked feature in most cases of flexion ; and it is acute or chronic according to circumstances. It occurs as a necessary result of acute flexion, the arteries, but more particularly the veins, being partially occluded by the bending of the uterus. The acute pain and tenderness of the body of the uterus in such cases are due to it. The nerves are also pressed upon at the seat of flexion. It was the opinion of the author that this strangulation of the uterus is a principal pathological element in all cases where hysterical convulsive attacks are observed : the acute congestion of the uterus determining directly, as well as indirectly, the occurrence of the convulsive seizures. Strangulation of the uterus and chronic inflammation of the uterus are intimately related and mutually coöperative in giving rise to the various sufferings present in many cases of uterine disease.

Dr. Hughes Bennett on Anæsthesia.—Dr. Hughes Bennett, at the meeting of the British Medical Association, stated that "he had always considered that anæsthesia was due to the pressure on the brain caused by an alteration in the circulation—for instance, congestion of the capillaries. No doubt it was by the same kind of mechanism that sleep was produced. The regular or irregular action producing sleep was a kind of congestion in the brain. Dr. Richardson gave the preference to bichloride of methylene, of which there was not yet much general experience. It was asserted by the American surgeons that there had never been a death caused by sulphuric ether ; but how far that was correct he did not know. Dr. Richardson had stated the proportion of deaths from chloroform to be 1 in 2,500. But there were many deaths from chloroform that were never published. As was well stated in the paper, death from chloroform was one of the most dreadful things that could occur. He (Dr. Bennett) knew of one very sad case that happened in Edinburgh. A young and beautiful lady, daughter of a barrister, in perfect health, went to a dentist's house one morning and had a tooth extracted. Five minutes afterwards she was dead. This was only one of many similar cases that had occurred, but had never been published. If a safe—positively safe—anæsthetic were to be discovered, which, though perhaps not so agreeable, would have the great advantage of safety, he thought that a very great blessing would have been obtained. The question was, Did sulphuric ether or bichloride of methylene give that safety?—*British Med. Journal.*

PARACENTESIS IN SYNOVITIS OF THE KNEE-JOINT. By J. FAYRER, M.D., C.S.L., &c.—In the *Indian Medical Gazette* of June 1, 1869, I published some cases of synovitis of the knee-joint treated by this method with satisfactory results. By these it was shown that with care in excluding air, carefully closing the puncture, and securing rest for the joint after the operation, not only may speedy relief be obtained, but with little danger of exciting fresh inflammation, even when the disease is of a subacute character.

The following case confirms this, and shows that the removal of the fluid may have satisfactory results, and that the relief obtained may be permanent. I believe that in the most acute cases it might be practised with advantage and great relief, though in so important a joint as that of the knee the risk would be considerable.

D. R., aged 24, a Bengalli peasant, was admitted January 30, 1870, with the right knee-joint distended with fluid, the result of chronic synovitis, which he traces to an attack of gonorrhœal rheumatism, three and a half years ago. He appeared to have had an abscess on the inner side of the thigh, just above the knee-joint, for there was an open sinus which burrowed under the integuments. The limb was flexed and painful, and so weak that he was unable to walk. The fluid was drawn off through a delicate canula, the joint having been punctured on the inner aspect on May 31. About six ounces of straw-colored fluid were evacuated with immediate relief, and the puncture was hermetically sealed with gutta percha dissolved in chloroform. Before introducing the trocar and canula the integument was drawn aside to make the opening valvular. Not the least constitutional disturbance followed. He had no inconvenience beyond slight pain for a day or two. There was no return of the swelling; the fluid was not again secreted. After the puncture had healed, simple strapping was applied, and potas. iodid. was given internally. He has gradually improved since; the thickening of the tissues is subsiding, and he walks with ease and can flex and extend the joint without pain.

There could be no doubt of the benefit in this case. He came into Hospital on January 30, and was under treatment for four months without receiving any material benefit until May 31, when the joint was tapped. He is now, July 30, quite well. The swelling and hydrops articuli have disappeared, and the weakened limb is rapidly regaining strength with exercise.—*London Medical Times and Gazette.*

FORM OF NEURALGIA OF THE JAW BONES, HITHERTO UNDESCRIBED.—Prof. S. D. Gross, Philadelphia (*Am. Jour. Med. Sciences*), describes a form of neuralgia of the jaw bones, which, so far as his information extends, has not hitherto been described. Its seat is in the remnants of the alveolar process of edentulous persons, or in the alveolar structure, and in the overlying gum, and is met with chiefly, if not exclusively, in elderly subjects. It is also more common in the upper than in the lower jaw. The part affected is usually very small, often not exceeding a few lines in extent. The soft tissues around do not seem to suffer, at least not in the same degree, as is so frequently the case in the more ordinary forms of neuralgia of the jaws and face. On the contrary, the morbid action is generally limited to the osseous structure. In rare instances there may possibly be some involvement of the gum, which is nearly always exceedingly hard and dense, grating more or less under the knife, and adhering with extraordinary firmness to the atrophied alveolar process underneath.

The pain is generally paroxysmal, coming on in fits and starts, very much as in ordinary neuralgia, the slightest causes being sufficient to provoke it. Pressure generally relieves rather than aggravates it.

The pathology of the affection seems to be compression of the minute nerves distributed through the wasted alveolar process, dependent upon the encroachment of osseous matter upon the walls of the canals in which they are naturally inclosed. In the natural state the nervous current passes along without any hindrance, but in this condition of the canals in question its transmission is interrupted, and more or less pain, known as neuralgic, is the consequence.

The disease usually comes on gradually,

and proceeds from bad to worse, until, in many cases, the suffering is rendered nearly intolerable.

Prof. Gross adds five cases of this affection, with their treatment, and believes that the only effectual remedy is excision of the affected alveolar process. No particular attention need be bestowed upon the after-treatment. A mild course of chalybeate tonics may be required when the patient is anæmic, or affected with flatulence and indigestion. He also exhibits a pair of forceps made for the removal of the alveolar process.—*N. Y. Med. Record.*

Hæmorrhage from the Umbilical Cord.—Dr. George Pepper related the history of a case of hæmorrhage from the free extremity of the umbilical cord. The child was a very fine, large male, eleven and one-quarter pounds in weight. The cord was cut, stripped up, and tied in the ordinary way with two ligatures. The child was then carefully wrapped up, and placed on the floor. After about half an hour, Dr. Pepper's attention having been given to the woman, he noticed that blood was escaping from the blanket in which the child was wrapped. The covering was removed, and everything around the child was found saturated with blood, which was still escaping from the cut extremity of the cord. The ligatures were removed and reapplied very firmly; the child was considerably depressed, but soon rallied. After about five hours he was again summoned, and on reaching the house found that hæmorrhage had taken place from the free extremity of the cord; the amount, however, was not very great; the ligatures were again removed and reapplied; four or five hours later hæmorrhage set in for the third time; on this occasion additional ligatures were thrown around the cord, and the dressing filled with tannic acid; no further bleeding took place. The child subsequently did very well, the cord falling off normally about the sixth day.

Dr. Goodell remarked that Dr. Pepper's case was to him unique, for in his own practice a third ligature had never been necessary, although a second one had sometimes been required, until he had adopted the following modification of Dr. A. F. A. King's method for the management of the cord:—So soon as the child cried lustily, or freely respired, he cut the still pulsating cord of the usual length, and after grasping it firmly at the umbilicus with the thumb and index finger of the left hand, to prevent it from being torn out, proceeded to "strip" it with the thumb and forefinger of the right hand, in order to squeeze out of it all the blood and as much as possible of the gelatin of Wharton. If the cord were lobulated with blisters of this gelatin, each one was nicked with the scissors and emptied. The compression at the umbilicus was now for a little while dispensed with, in order to allow the internal portion of the vessels to collapse, and then a second instalment of "stripping" was resorted to. When all hæmorrhage had ceased—which was invariably the case after this manipulation—and the cord had become perfectly flaccid, it was tied in the usual manner. But neither binder nor greased or scorched rag, nor a dressing of any kind whatever was afterwards used, the cord being left to dangle about freely. He—Dr. Goodell—claimed for this method, that the cord dried up without any bad smell, or process of putrefaction, and fell off like a ripe fruit without leaving a raw stump. He stated that formerly two astringent lotions of tannin and zinc were kept at the Preston Retreat, which were in constant demand for the sore navels; but that, since adopting this new method, out of more than two hundred infants not a *single one* had had a pouting, angry-looking or purulent umbilicus; nor had any one suffered from fungoid vegetations or umbilical hernia. That, since anatomists had pointed out the existence of muscular fibre in the cord, he believed its ligation to be unnecessary; for if hæmorrhage did not take place immediately after cutting and "stripping" it, it was very unlikely to occur at a later period. That he had once successfully dispensed with the ligature, but had suffered so much anxiety of mind lest a regurgitation of blood should occur during his absence, that he had ever since invariably applied it, although he was ashamed of this cowardice, and considered it the result of early prejudice. That the fact of a second, and even third ligature being occasionally required to arrest subsequent hæmorrhage—as in Dr. Pepper's typical case—so far from being an argument in favor of ligation, was to him rather an argument against its use. For, if the cord were tied before being thoroughly emptied, and allowed to collapse, the blood imprisoned in it by the knot, being out of the circulation, would not only keep the vessels patulous, but would also necessarily undergo a process of putrefaction.

Dr. Duer stated that he had been induced by Dr. Goodell to try this method in a case occurring in his own private practice which they saw together, and so gratified was he with the result that he was now introducing it in the lying-in wards of the Philadelphia Hospital.—*The American Journal of Obstetrics.*

HYGIENIC TREATMENT OF DISEASE.—"Side by side with the use of medicine, and not second to it, is the so-called hygienic treatment of disease—the study and regulation of the vital forces. The influence that the physician exercises over the mind, and through the mind over the body; the soothing or the stimulation of the nervous power; the calming of exaltation or the stirring up of apathy; the quieting of the over-busy brain or the spurring of the flagging will; the repose of over-used powers or the awakening of suspended vital functions; the subduing of the over-sensitive skin or the stimulating of it where wan, muddy, and lifeless; the limiting of supplies to the over-fed frame or the repair of the wasted body by the proper kinds of food and stimulants; the bringing into play, and so again into existence, muscle that had become wasted and paralyzed by disease; these are among the aims the physician seeks to accomplish, and these are among the means which he seeks to employ irrespectively, but by no means necessarily, without the use of medicine: these are among the agencies which you hold in your power in the treatment of disease, and that you, each of you, exercise daily in coping with the various forms of malady, of ailment, and of constitution." (Extract from the Address in Medicine, by Dr. Francis Gibson, at the last meeting of the British Medical Association).—*Lancet.*

ON THE DIFFERENCE BETWEEN A HAND AND A FOOT. By C. TICHBORNE, F.C.S., M.R.I.A.—Dr. Haughton, in a fourth communication upon animal mechanics, considers this subject in connection with the flexor tendons. "The fore feet of vertebrate animals," says the author, "are often used merely as organs of locomotion like the hind feet, and in the higher mammals they are more or less cephalized or appropriated to the use of the brain. The proper use of the hand is to grasp, that of the foot to propel by the intervention of the ground." In a hand proper the strength of each portion of a tendon is proportioned to the force it is required to transmit, and we should, therefore, expect the strength of the tendon above the wrist to be greater than the united strength of the finger tendons. Conversely, in a foot, we should expect the united strengths of the flexor tendons of the toes to exceed the strength of the flexor tendons above the heel. The author gives the result of his investigations in connection with some thirty-six animals. All the animals realized the typical idea of a true foot with a variable amount of friction at the ankle-joint, this friction disappearing altogether in the Boomer Kangaroo, whose method of progression realizes absolute mechanical perfection, as no force is consumed by the friction of the flexor tendons at the heel. The only animals whose feet deviate from the typical foot were three—viz., the alligator, porcupine, and phalanger; in these the foot has the mechanical action of a hand, and the flexor tendons above the ankles exceed those below.

Dr. Haughton operates in the following manner: He measures the relative strengths of the deep flexor tendons of the hand above and below the wrist, and the relative strengths of the long flexor tendons of the foot above and below the ankle in the following manner: He weighed certain lengths of the tendons above the wrist and ankle, and compared their weights with the weights of equal lengths of the flexor tendons of the fingers or toes, assuming that the weights of equal lengths are proportional to their cross sections, and then again proportional to the strengths of the tendons at the place of sections. The difference between the weights above and below the joint represents the sum of all the frictions experienced by the two tendons between the points of section.—*Dublin Med. Press and Circular.*

THE MEDICAL MEN OF STRASBOURG DURING THE LATE SIEGE.—Strasbourg has been the scene of many a noble deed, and we rejoice to know that her renowned Faculty of Medicine has been equal to the occasion. The exertions of both professors and students have been worthy of the brave defence, and to those exertions was, no doubt, due the absence of many additional miseries. The awful trial has been passed through with much less sickness than might have been anticipated. Sick and wounded appear to have been thoroughly attended to and well cared for. We remember, naturally, that the Strasbourg Faculty was one of the most renowned in Europe. Alas! that it should have been tried to such an extent. All honor to it that when tried so severely it was not found wanting.—*Ibid.*

Medical Miscellany.

The Baby Farmers.—At the trial of the (so-called) Baby Farmers in England, the evidence proved that the infants who were in charge of one of the prisoners had been treated with narcotics, and insufficiently supplied with food. A verdict of guilty was rendered against her, and she was sentenced to death. The second prisoner, who had been found guilty of obtaining money by false pretences, was sentenced to eighteen months' imprisonment.

Dr. N. G. Ordway, of Portland, Maine, who was sued for malpractice in the matter of an operation performed upon a patient's hand, has received a verdict in his favor on the singular defence, as reported by a local paper, "that the ether used in the operation affected the physician so that he was unconscious of what he did."—*Med. Gazette.*

Case of Multiple Calculi.—M. Bron related to the Lyons Medical Society an account of a case which came under his care in which 723 calculi were removed from the bladder by the *lithotriteur à cuiller* with temporary relief. Two or three remaining in the bladder, however, formed the nucleus of a single stone which was successfully removed by lithotrity, the patient being 82 years of age.—*Lyons Med.*

Man *versus* Animal.—"Notwithstanding the mischievous outcry which has been lately raised against the use of humanized lymph for vaccination, nearly 14,000 applications have been made to the government for it, including many from distant parts of the world."—Mr. Simon's (Med. Office of Privy Council) Report quoted in Aug. 27th No. of *British Medical Journal.*

Mercurial Suppositories in Constitutional Syphilis.—Prof. Lebert (*Berlin Klin. Wochenschrift*) has had such success in the employment of these suppositories that he is desirous of calling attention to their value.

They are formed by mixing mercurial ointment with butter of cocoa and white wax, so as to obtain a convenient consistence.—*N. Y. Medical Record.*

Diet of Parturient Women.—Dr. Hugh Miller believes that the fat cells of the milk for the first few weeks after delivery arise from the fatty disintegration of the uterus, the cells of which are absorbed by the blood, and through the circulation secreted by the mammary glands. Hence heat-forming food is unnecessary and may be injurious, while flesh-forming diet compensates for the waste during labor, and enables the patient to support the further changes going on.—*N. Y. Med. Gazette.*

Labor Omnia Vincit.—The Troy *Press* chronicles the safe delivery of a matron aged 65, of her first born, after more than forty years of marriage. Have the exploits of Girault and Sims reached that part of the country?—*Ibid.*

The friends of Dr. Buckminster Brown will be pleased to learn of his return from Europe after a very agreeable tour, and with entire restoration to health.

Correction.—In the Journal for Oct. 13th, page 252, line 9, for "opium," read *tincture of opium*; to line 14 add, "when there has been excessive hæmorrhage."

To Correspondents.—Communications accepted:—Delayed Symptoms after Injury to the Head.—On Gelseminum Sempervirens.—Medical Notes upon the Aborigines of Alaska.—Advantages of Foreign Study to American Medical Graduates.

Books and Pamphlets Received.—The Physician's Prescription Record, containing nearly 400 Prescription Blanks, with Forms for record of the Condition of the Patient, and copy of Prescription. Philadelphia. S. W. Butler.—Pennsylvania Sanitarium. Report read at a Re-union of the Directors and their friends, in Philadelphia, on Thursday, May 19th, 1870, by the President. Media, Pa. Pp. 16.—Observations on the Physiological and Therapeutical Effects of Galvanization of the Sympathetic. By Drs. A. D. Rockwell and G. M. Beard, of New York. Pp. 16.—Thirty-fourth Annual Report of the Officers of the Vermont Asylum for the Insane, for year ending August, 1870. Pp. 14.—Report to the Surgeon-General of the United States Army, on certain Points connected with the Histology of Minute Blood-vessels. By Brevet Lieut. Col. J. J. Woodward, Assist. Surg. U.S. Army. Pp. 8 4to, with 11 Photomicrographs. From the Surgeon-General's Office, Washington.

Married,—In Charlestown, Oct. 17th, Thomas Crozier, M.D., of Charlestown, to Miss Maria Louise Ogden, of Boston.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending Oct. 22, 1870.

Cities and Towns.	*No. of Deaths.*
Boston	101
Charlestown	12
Worcester	10
Lowell	17
Milford	5
Chelsea	11
Cambridge	12
Salem	7
Lawrence	9
Springfield	3
Lynn	10
Pittsfield	2
Fitchburg	4
Newburyport	4
Somerville	4
Fall River	12
Haverhill	2
	226

Prevalent Diseases.	
Consumption	39
Dysentery & Diarrhœa	13
Cholera infantum	11
Pneumonia	11
Typhoid fever	9
Scarlet fever	7
Croup and Diphtheria	6
Whooping cough	4

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Oct. 22d, 101. Males, 52; females, 49. Accident, 1—apoplexy, 1—aneurism, 1—disease of bladder, 1—bronchitis, 1—inflammation of the brain, 1—disease of the brain, 2—cancer, 2—cholera infantum, 4—cholera morbus, 1—consumption, 16—convulsions, 3—croup, 2—cyanosis, 1—debility, 3—diarrhœa, 5—dropsy of the brain, 1—drowned, 1—diphtheria, 1—fistula, 1—scarlet fever, 4—typhoid fever, 3—disease of the heart, 5—hæmorrhage, 1—infantile disease, 3—intemperance, 1—disease of the kidneys, 4—disease of the liver, 4—laryngitis, 1—inflammation of the lungs, 3—marasmus, 1—jaundice, 1—old age, 2—paralysis, 1—pleurisy, 1—premature birth, 1—puerperal disease, 2—scalded, 1—suicide, 1—teething, 4—tumor, 1—unknown, 6—whooping cough, 1.

Under 5 years of age, 36—between 5 and 20 years, 5—between 20 and 40 years, 22—between 40 and 60 years, 23—above 60 years, 15. Born in the United States, 62—Ireland, 25—other places, 14.

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AN INTRODUCTORY LECTURE DELIVERED BEFORE THE MEDICAL CLASS OF HARVARD UNIVERSITY, NOV. 2, 1870.

By JAMES C. WHITE, M.D., Adjunct Professor of Chemistry.

GENTLEMEN OF THE MEDICAL AND DENTAL SCHOOLS:—

WITHIN the last few weeks many of the great cities of the civilized world have seen assembling within themselves many thousands of young men, drawn together by one common purpose, the same which brings you here to-day; some from the adjoining recitation room only; some back again after a period of quiet reading and resting in country homes, eager to renew old acquaintanceship and curious to study the faces of those who are to be your fellow students during the coming winter; some fresh from college or other preparatory school, it may be the field or workshop, to hear for the first time a lecture upon the profession you have chosen for the study and work of your lives. The pleasant task of first addressing you, of bidding you heartily welcome to these halls and to your teachers, has fallen to the lot of one of the youngest of them, who has not had time to forget his own first impressions of student life, its expectations and dissatisfactions; who hopes to be able still to speak to you simply as a fellow-student, only a little farther advanced along the path you are just entering.

I will not question the motives which have led you to choose medicine as your profession; it would be perhaps impossible for most of you so to analyze them as to give a reason for your choice satisfactory even to yourselves. During the sophomore and junior years there seems to spring up among undergraduates across the river a wide-spread passion to study medicine. It obtrudes itself in the form of half-dissected cats and their distorted skeletons, of unpleasant emanations and unexpected explosions within the Rumford rooms (or did in my day), in half-whispered accounts of visits to the operating theatre on Saturdays and entire silence with regard to the illustrations of syncope furnished the class while there. But these are exhibitions of a merely passing fancy, and the men who show the strongest manifestations of it seldom come here as students after graduating. It is not to be expected that you have chosen understandingly; you may have been drawn to it instinctively, or because a love of botany or partially developed taste for chemistry or zoölogy has guided you, but it is impossible that you should, even in a faint degree, comprehend all the difficulties and delights, the grandeur and the gravity of the study of medicine, until you are fully engaged in it, until it has completely possessed you. It is for this reason that counsel from those older than yourselves is valuable at this important period of your lives, that you may know in what spirit you are to begin, and after what method you should pursue, the study of this unknown object of your immediate future.

Fortunately we can go but a little way in the study of any of the branches of natural science, before that spontaneous and inevitable enthusiasm for the subject is developed, which attends the true student through life. Nature rewards those who thus love and woo her, with this spirit abundantly. It is the most prominent characteristic of all eminence in science; it permeates the whole existence of the real masters and teachers of our art, and radiates upon all who come within their influence a kindred glow and devotion. Recognize and cherish its first impulses in each other and yourselves therefore. It will strengthen by encouragement, it may be killed in the bud by a laugh or a sneer. It is the fashion in some places to deride it and its manifestations, if they seem a little above or outside the ordinary worldly or practical motives of action, and fashion is often mighty in such matters. It may crush out all the lofty and generous impulses in a generation, or in a community, or in a school of young men. But do you not be ashamed of enthusiasm. It has sometimes led men without a proper balance of intellect to do a foolish thing, but never an ignoble one. It is impossible to achieve real greatness in our art without it. Cultivate a spirit of enthusiasm for it therefore, and thus honor your manhood and the choice you have made.

But I need not tell you that something more than this is necessary, and more necessary in our profession than in the study of any other ; that is hard and honest work. Work which, beginning with this hour for some of you, is to continue for you all as long as you claim the title of student or doctor of medicine. There can be no end, no interruption. You have come here to learn medicine, but in the three years nominally assigned to that object we can teach you almost nothing of its past history, but a part of what you should know of what is at present known, so much only as will enable you to go on with ourselves with the study of that of the future. You will learn that in those branches in which science is making the greatest advances the least is positively known, that the results of recent investigations in pathology, physiology and chemistry are as startling as was the discovery of the circulation in its day, and that each new revelation shows only more clearly how ill-founded is much of what we have hitherto treasured as fixed knowledge, and how much remains to be known.

You have entered, then, upon the study of a science always changing, to be ever new. Our posterity will never exhaust, never complete it. Your work, therefore, is of two kinds—to study the labors of other men in their relation to those of the past, and to learn to observe and investigate for yourselves. Now you will never advance far in either course without this work in its strictest and hardest sense. Call it "digging," labor, or what you will, you cannot shirk it or avoid it in any way. It is before every one of you, whose humblest ambition it is to make himself a thorough, self-respected physician, in its naked and unpleasing reality, as your inevitable lot, as long as your mental and physical powers hold out. As long as the science of medicine progresses you must advance with it ; the moment you drop the oars, you are far back in dead water.

This is not an inviting picture, I know, of your life to-morrow and every day to come. Work is not an easy thing, at least to most men. It often means turning from the sweet and pleasant things of life, which are close at hand, to do much which is dry and difficult, apparently needless perhaps, for an object far off and doubtfully attainable. Such is the path, however, along which we must go, and happy are they who can follow it, surrounded by that golden atmosphere of enthusiasm, which makes one's footsteps swift and light.

But work can be made easier by cultivating habits of industry, by forming plans of study and disposition of time, the routine of which must be held inviolate. Custom makes everything endurable at last. Before this week has closed make your choice of studies, what lectures you will attend, what time you will pass in the dissecting-room and hospital, how you will spend the intervening hours, and how much of the evening you will give up to the requisite reading. These plans must vary for each of you of course, according to what you have already accomplished in your studies ; but having wisely fixed them and in proportion to your strength, make it a matter of honor with yourselves not to deviate from them a single day to the end of the course. Let even February, when lectures become a burden to student and teacher, and when lengthening days foretell the relief at hand, find you constant to this pledge. If you succeed, you will have gained a victory which will well nigh of itself ensure your eminent success in after years, for the next trial will be easier to bear, and repetition of such training fixes the habit for life. Remember that there are no short cuts in medicine, that you are to take, what seems perhaps as utterly useless as it is uninteresting to you, at the value your teacher sets upon it, trusting him as the better guide to choose what you should be taught. With the confident expectation of the dawning of this spirit of enthusiasm, and with such self-promises of earnest and steadfast devotion to your purpose, I would have you to-day begin and continue your medical life.

But which of all the many branches taught here am I to select, and how shall they be best studied, are questions which will naturally arise in the minds of those just entering upon these duties. To those who have received no advice upon these matters, and have never attended a course of lectures, I would say, devote the largest part of your time to anatomy, physiology, and chemistry. These will teach you the structure of the human body and the phenomena of its functions, which constitute healthy life. Many life-times have been spent in acquiring our present knowledge of them; you can well spend a year upon the same. Until you have done so, you cannot comprehend the later studies relating to the abnormal manifestations of the same vital actions we call pathology. Disease can never be properly recognized, interpreted, or treated, until the composition and function of every tissue and organ in the body are so intimately known that the nature and extent of any deviation from their normal laws are clearly understood. The autopsy room and lessons in pathology taught there are of no use to you, until you have familiarized yourselves with the dissecting-table and the histology learned in the microscope room. The bedside and the medical lecture-room are no places for you, until you have learned all that physiology will teach, and have made yourselves familiar with chemical reagents and their action upon the normal tissues and fluids of the body; you cannot understand therapeutics or venture to produce the physiological action of drugs, until you have studied their toxicological laws and relations of incompatibility. Two years are given to these studies in better schools than ours; so much you cannot give in our short and insufficient courses, but do not be tempted to give less than half as much. These branches are the groundwork of the art of medicine, and it is in these that students generally fail in thoroughness, and therefore as physicians fail to know their art through life.

You are to study them in the months which immediately succeed in several ways. Sitting through a lecture or a course of lectures is not necessarily study at all, and even faithful and comprehensive listening is but a small part of it. What you hear is to be received into your mind, not to be shut up within the covers of a note-book. It is to be digested while the impression is fresh upon the memory, and to be fixed there by the evening's collateral reading. A note-book is useful for such immediate assistance to the memory; if kept as a substitute for it, it is worse than useless. But in addition to the lecture and the faithful reading at night, your days should be largely given to the dissecting-room and the microscope, and to such chemical and physiological laboratory work as opportunity affords. A few dollars will give you all the apparatus you require to work out some of the most important investigations in these branches for yourselves, and to learn the processes of manipulation, which you will never acquire later, if you neglect them now. By such beginnings you will gain the taste and courage for that independent work in later years which will distinguish you from the ordinary practitioner. I do not mean to say that you should take absolutely no share in any of the other exercises of the school, that you should not attend operations and occasionally visit the hospital, and see an autopsy, and perhaps study surgery and materia medica; but the less of these and the more of the others the better. A single year's attendance upon the advanced branches after such a preliminary training will give you a far deeper knowledge of them than one gets by a three years' course pursued without system or given wholly to the so-called practical or special branches.

There is no such contemptible spirit among students as this exclusive or preferred attention to such parts of their studies as seem to have a practical value. It exhibits itself in attendance upon the lectures relating to the practice of medicine or the hospital visit only, and in the production of the note-book only when the word treatment is mentioned or the formula of a recipe is given, and in the neglect of all that raises medicine to the rank of a science and its followers to be learned men. It degrades the art to the level of a mere trade. Such would be the spirit of one of a band of naturalists who, in regions unexplored by science, should spend his time in stuffing his pockets with grains of gold for future barter, while his companions were collecting the new and beautiful productions of nature's present work or the vestiges of the past lying about him, the possible and long-sought solutions of the grand mysteries of creation. I trust there is no one here who will entertain for a moment the unworthy thought of what is the money value of any information he may gain this winter. The truths we teach are worth knowing for their own sake, or they are not worth hearing. With us must rest the responsibility of the selection of what is best to teach. Have confidence enough in our judgment to receive as alike important whatever we offer.

There is another error with regard to choice of studies among students, of recent origin and of increasing importance. It has arisen from the modern custom of specialties in practice, and the desire on the student's part to devote his time wholly to those branches which seem to him most intimately connected with the particular specialty he may have thus prematurely elected for his future career. It is an error fatal to your life both as student and practitioner, for it is impossible properly to study the diseases of any one organ of the body without that preliminary knowledge of pathology, which is only to be gained by a study of the whole. The most renowned teachers in special departments have been most thoroughly accomplished in others. What would ophthalmology, for instance, be to-day, had its special students not been eminent physiologists and physicists? Make no plans for your future life of practice of this kind, while you are students; the physician only can study a specialty. Fortunately it is a self-limited error, for the present fashion which leads almost every young medical man on going abroad to study a specialty, tempted by the easy success of many who led the van, will soon glut the real demand for such practitioners and convert general practice into the speciality, thus restoring the equilibrium.

I do not propose to discuss the subject of specialties, however; only to warn you, that you as students have nothing to do with it. What it has done for medical science in certain departments, you have opportunities of learning from the courses of University lectures, hitherto so-called, delivered in the school during the year. I am sorry to say that these opportunities have not been improved, as they should be. The Faculty has endeavored during the past few years to have presented to you by gentlemen outside their body and most eminently fitted for such duty, a summary of the most recent advances in these new and special fields of research. These courses have been prepared with great outlay of time and painstaking, and such labor has been wholly gratuitous on their part and for your benefit alone. They have furnished just such advanced knowledge, as many of you will go abroad to seek after graduating, and you have it offered you here by, I do not hesitate to say it, some of the very best students of the best masters. Let me advise you to show your appreciation of such teaching and of the personal efforts of these gentlemen in your behalf by a more universal attendance upon such courses.

There is one thing else I advise you to study during your whole pupilage, that is the German language; because the most of you have no doubt already more or less knowledge of the French, and secondly, because it is so much more important. Indispensable is the term I should use, for the science of modern medicine cannot be pursued without it. Why this is so, I shall try to explain later, but the fact is to be accepted that nine-tenths of all that is new and important in physiology, pathology, and medical chemistry is the work of German hands and brains, and is given to the world in their tongue. Sooner or later the cream of this is translated into English no doubt, but before it is converted into this medium of circulation much of it is no longer new, and for workers in the same fields nearly valueless. If you desire to keep up with the progress of your art, you must learn German. It is far more essential to you as students than any knowledge of Greek, or Latin, and French you may have or have forgotten; it will be to you almost a sixth sense of acquisition. Begin the study of it at once. Those of you who purpose to continue your studies in Europe, will find yourselves thus enabled to enter upon them without a six months' loss of time after reaching your field of operations, and most of you may not find elsewhere the favorable opportunity of learning which a large city affords. You all could use it to your immediate advantage in the reading to be done in connection with the lectures in some departments.

Thus I have tried to show you in what spirit you should take up the work before you, how you should do it with your might, and in what order and method you should pursue the studies, and all the studies, prescribed for you. I have said that with us rests the whole responsibility of the choice of those studies and the character of the teaching. If you fail therefore after faithful improvement of the opportunities here offered to become physicians of the first order the fault is ours, and you and the community may call us to account. Is the standard of education in the medical department as high as in the others of the University of which we are a part, as in the other medical schools of the country, as in the schools of Europe, or as it should and can be? These are questions about which a very wide difference of opinion exists, and in which the profession, and you, as future members of it, have the same interest as ourselves. It would be difficult perhaps to determine whether the system of medical education, so long adhered to in American schools, is due to the views concerning its efficiency held by the profession generally, or whether it is the schools which are accountable for the tone which prevails in the profession at large with regard to the subject, because each creates the other; the schools fill up the ranks of the profession with their handiwork, and the profession in turn furnishes the teachers and governments of the schools. But it is perfectly fair to judge the latter by their fruits, and a comparison of the character of the medical profession with that of the production of the other departments of the University warrants the conclusion that in its relations to the scientific aspects of medicine we cannot claim for ourselves our proper share in the credit which attaches to the other learned professions. That our cities are not known and honored in other lands as much for distinguished physicians as for their well-known men in literature and science, is our own fault alone, and the reason is that we do not sufficiently honor our own calling. We labor mainly to acquire position and comforts, but how few of us are really students and care more for the advancement of science than for our own "getting-on" in the world. How seldom has an American physician made independent and systematic investigations in any of the sciences connected with medicine! How different is a medical reputation in other countries! In Germany the celebrated physician first makes for himself a name by incessant toil and self-sacrifice. He cares neither for society, for appearances, for comfort, only for science, and then in after years come riches and honors, as well-deserved rewards. I would not have my meaning misinterpreted. I believe that those amongst us, who are so deservedly popular as practitioners, are in every way worthy of their success. It is the resting satisfied with success in practice and making this our only aim, which is so fatal to the progress of medicine with us.

This opinion is less deserved of some parts of our country than others; it has been too true I fear of all. I take my own share fully in any odium which may attach to any single member of the profession; but I believe that such will be the inevitable future of medicine in America, until change is wrought, where I consider the source of the trouble lies, viz., in our medical schools. So long as it is held that there is a demand for cheap doctors in this country, and that an American can get as good a medical education in three years without any necessary preliminary mental training, as a Prussian or Austrian youth thoroughly drilled to methods of work and habits of industry can get in six years, or one at any rate good enough, so long we shall make poorly educated doctors and nothing else; or we should do so, if students themselves did not know better and act accordingly in exceptional cases. A student who spends one or more years in foreign schools, after being made a doctor here, cannot be pointed at as a specimen of American handiwork in answer to this view of the case. Do we ever reflect that the multitudes of American students in the medical schools of Vienna and Berlin are a reproach to our country? Why do we not find an equal number in the seats of Law and Theology, of natural and mechanical science there? The high and well-deserved reputation, which our students bear among foreign classes for quick perception and interest in their studies, shows the quality of the native material waiting the proper training at home; though I fear that our student abroad clings too closely to the spirit of his American education, and is found still following too exclusively the practical branches of his art. This is the evil genius of our system, its radical defect. It is here and within our schools that we must meet it. Until we renounce the theory that medicine in America is to be taught not as a science as elsewhere, that only so much of it is to be served up to the student as will make him a good practising doctor, and that he has no share in its future progress as an independent worker in its deep places, we need not hope for better things. Plans for elevating the standard of education by longer courses or forced attendance throughout the year, are of little importance, until we are prepared to make the spirit of our schools what it should be. Then every desired reform will follow without forcing.

How is it with the other departments of learning? Is there not the same demand for poorly educated men in the other professions as in medicine? Yet what would we say of the character of a law-school which should content itself with a plan of instruction adapted to make its students merely good practising attorneys, and not attempt to stir a higher ambition in them for the graver matters of statesmanship and international law; or what of a polytechnic that should turn out chemists and mining engineers with so little self-respect, so low a conception of the dignity of their calling as to sell their name to be attached to every nostrum in the market, or to furnish from an ounce of ore a certificate that a mountain of equal value awaits the investment of too credulous capitalists? Should we not demand a reformation in their management; would not a University to which they were attached enforce it? Fortunately this is not the character of these professional departments of Harvard; as high a tone prevails throughout them as in any of the oldest and most renowned schools of Europe, and their graduates are recognized as the peers of their co-laborers all the world over. Can we say this of those whose education has been acquired solely in any of our schools of medicine? Is there any reason why we should not be able to say it, or at least should not want to say it? Has public opinion not a right to demand that medicine like all the other learned professions shall be of equal excellence with that of any country? For if there is any question of education in which the public should feel an interest, and act on it, it is that which determines the character of those to whom it must confide the care of its physical well-being.

To those who may say that I am taking an unpatriotic view of the matter, that my estimate of medical education and our profession in America is too low and unfounded in fact, I will only reply: when I find the young men of Europe flocking to our shores and crowding our native students from their seats and from the bedside, when the fees of our best lecturers are mostly paid in foreign coin, and when thousands of wealthy invalids from across the sea fill the waiting-rooms of our physicians, then I will confess that I am wrong, and that of the two systems of education ours is the best. Until then I shall seek in the spirit and working of their schools the secret of their success, the cause of our failings.

Turning a little way back into the past will perhaps bring out in still stronger lights the truth of the lesson we may read there. . . . . There was a time when the French capital was looked upon by the medical profession throughout the world as the one and only seat of science, where alone the grand truths of our art could be discovered and taught. Students from every country went thither to complete their studies, and to see the men whose names had been upon the lips of their teachers all through their early instruction at home as demi-gods in science, and whose opinions they had been taught to receive unchallenged, as fixed principles. Even the hospitals associated with their teachings became famous, and Hôtel Dieu, La Pitié, La Charité, du Midi, San Louis, were as familiar and classic names to the student of medicine, as the Parthenon and Forum had been during school and college days. The distinguished men who composed the Faculty were then at the height of their fame, and formed a body whose brilliant reputation was fully deserved and has never been equalled. Paris had then no rival as a school of medicine; she was the acknowledged front and centre of science. This was only a quarter of a century or less ago; but what position does she hold now? The earnest students of other countries no longer visit her exclusively, or even first or second, to complete their general studies, or to perfect themselves in any special branch of our art; nor is French now the universal or most important language of science, as it once was. The very names which then commanded such world-wide respect are now almost memories associated with the past, and are no more the representatives of the medicine of to-day.

What is the cause of this decadence? Why is it that the Wiener Schule holds at this moment the place then occupied by the Ecole de Médecine? The great masters in Paris have not died out and left their places to be filled by smaller men in Vienna, for with one or two exceptions the roll of French professors bears the same distinguished names that it did twenty-five years ago. Other causes have wrought the change. Gradually the philosophic German mind, so sceptical and irreverent as to accept no dogmas unchallenged, and so patient and industrious in following the suggestions of nature to their very source, began to make itself heard. This influence, at first felt in small things and expressed in special directions, soon became an acknowledged power, as the careful observations of devoted students, men who cared for little else in life than their studies, who had no higher ambition than their scientific reputation, who knew no other pleasure than was to be found in the laboratory or hospital, and who never aspired to become rich, became known. Such men as these were called together, as their names and works attracted attention, and formed the Vienna School, a body of special students, in no way men of brilliant genius, but keen observers and accomplished teachers. It is this devotion to study in special directions, as the prime object of their lives, science before wealth, that has made German medicine what it is. It has given us Rokitansky, Virchow and Förster in pathology; Wunderlich, Oppolzer, Skoda and Frerichs in general medicine; Hyrtl in anatomy; Brücke and Ludwig in physiology; Jäger, Græfe, Donders and Arlt, Hebra, Sigmund and Scanzoni in their special departments; Liebig, Lehmann and Scherer in chemistry, and many other distinguished instructors who might be mentioned. In the meanwhile Paris has been living chiefly on the reputation of her past greatness, and the slight progress she has made has seemed complete stagnation by the side of the vast advance of her indefatigable German neighbors. . . . .

This is a sketch I made only four years ago. See how closely the words then written resemble the language of Prof. Helmholtz, perhaps the purest scientist living, at the meeting of the German Association for the Advance of Science, at Innsbruck two years ago, in speaking of the secret of the success of science in Germany—the *Sittenstrenge und uneigennutzige Begeisterung* of its students. Words which Prof. Rolleston quotes in his recent address before the biological section of the British Association, and which, that they might be the guiding principle of all other students of science, he translates—"Severe simplicity of manners and absence of a spirit of self-seeking." What might not be said of the lesson brought down to these memorable days in the history of the two nations. How have splendor and self-glorification, worship of pleasure and shallowness of life gone down before earnest devotion to duty, trained habits of industry, and the highest and most universal education of the individual!

When I went to Vienna, fourteen years ago, I found but one American student there; but few had been there before me at long intervals, and hardly one, I believe, to remain any length of time. In contrast, a picture may be seen hanging in the office of many of our youngest physicians apparently of the recitation-room of our professor of clinical medicine during the summer session. The somewhat unstudent-like grouping will reveal to closer observation, however, that it is a Vienna photograph, but recently taken, in which that instructor is surrrounded by the multitudes of our former students, who were continuing their studies there at that time. The change from then to now is not greater perhaps than what may follow a few years hence, when the graduates from our progressive collegiate department shall omit the intermediate step here, and begin, as well as end, their medical studies in foreign schools. Such must inevitably follow as the sequence of a more general acquaintance with the superior advantages offered by them, and with that requisite knowledge of the German language which enlarged freedom of election will afford, unless American schools shall make such a course unnecessary, by making themselves what those are and they should be.

This is to be a work, however, of slow and gradual progression. It cannot be enforced by any enactment of associations or change of statute alone. Their future success depends upon the teachers, and teachers, such as have made those schools what they are, must be created by our schools, and that is possible only by adopting the spirit and system which have led them up to their greatness. An ardent enthusiasm, earnest devotion to work, and a search for truth for truth's sake alone; and a system which recognizes a thorough scientific training as the only groundwork for a medical education, which teaches to the utmost limit the science of medicine in all its branches, and which believes, and proves, that the most practical man and best practising physician is he who has the widest and deepest knowledge of these scientific truths.

Follow with me the first clinical teacher in the world at the bedside. See how largely, in all he teaches, he draws upon the sciences connected with medicine, how thorough a knowledge of them he reveals, how constantly he applies it in the illustrations of his marvellous powers of diagnosis, how it makes him the renowned practitioner, as well as teacher, that he is. His knowledge of them is not picked up second hand, nor is it a patchwork of fragments selected with sole reference to its practical application. None more eager than he in attendance at the laboratories of his colaborers in chemistry and physiology, at the microscope, by the cadaver; none so constant through years, always searching, but as ready to follow as able to lead, knowing that there can be no halt in such labors and duties. Can we wonder at the success of a school where the most practical branches are thus taught? Yet there are those who hold and express honest convictions that such studies are not a part of a practising doctor's business, and that their patients are even the worse for it. In other words, that a man cannot make personal investigations in the sciences connected with medicine and do his whole duty by his patients. See how the vast advances in modern ophthalmology, which have elevated this branch of surgery to the rank of a true science, have been the result of the labors of a few such men as Donders, performed in the midst of the busy life of the popular practitioner. Do we not prize the professional advice of such as of the highest value, and seek it at any price? Scientific truths of the most important practical bearing in medicine must in fact be mainly the result of the study, if not the prime discovery, of medical men, and I believe that no man can be a fit teacher to a medical school in any of the collateral branches of science, who has not received that special training which a medical education alone affords.

Who of us can say that he gives his whole time to his patients, that he takes no interest or active part in concerns outside the immediate care of patients, which might not, with the same devotion to them, be spent as well in the cultivation of scientific studies? Do not some of our best and busiest physicians find time and inclination for such side studies? May I not be allowed the liberty of naming one formerly and so long connected with this School, who though now retiring from an active part in the labors of his life, has been for so many years the acknowledged and revered head of our profession in New England, the physician to so large a portion of our most refined citizens, and the councillor sought above all by physicians far and near; is it believed that he was any the less skilled or attentive in his personal care of the sick, any the less sagacious in consultation, for the labors of his earlier life as explorer and writer in the unroamed fields of American botany, in whose path no gleaner has since been needed; or for those later studies in the arts and sciences, which made him so long conspicuous as the fit president of the most ancient and learned body of men of science and letters in the country? Would any of us change the memory which will attach to the name of Bigelow in American medicine? Would we rob our models of the ornaments which have given them this distinction? I fear we should thus degrade the greatest of them, if we are consistent with such teaching. Let us rather believe that great physicians have become great not in spite of, but in consequence of this cultivation of the sciences and liberal studies, which so characterize their lives.

Let me use the branch of medical instruction with which I am connected as an illustration of the relations of what is called science to medical education. There is no study which is considered less practical by the student, therefore there is none in which he takes so little interest, none in which he betrays such extreme ignorance in many cases at examination for degrees, as chemistry. How shall such a branch be taught? Chemistry has become of itself a circle of sciences, which no one man can now master, even by exclusive devotion to its study. It is applied chemistry then alone which can be taught in a medical school, and the question is, how widely or how narrowly shall we interpret its application. Take, for instance, its relation to the study of one of the most important excretions of the body, the urine. Every student knows the importance of a chemical examination of this solution as a means indispensable in the diagnosis of certain diseases, and that it is necessary to be able to recognize the presence or absence of certain substances in it by simple tests. But is it enough for him to know, or for us to teach, the crystalline form and chemical reaction alone of uric acid and urea, for instance, and the semeiology of their fluctuations? Is he not rather to be led also to comprehend how intimately the study of these bodies is connected with that of the metamorphosis of our tissues and the dynamic value of the intermediate products of tissue change; how from the former an almost endless series of new compounds may be created, some of which are important way-stations between health and disease, and which can only be understood through the formulæ which express so much while seemingly so meaningless? How the latter, the last expression of a long series of intermediate chemical changes, passes out into the world again reduced to the simplest form of matter, ammonia and carbonic acid, to form in turn the life of the vegetable upon which the animal directly depends for support. How the quantity of urea is the index in part of the amount of heat and motion manifested by our tissues; how its spontaneous change into ammonia and carbonic acid leads to the lesson to be learned by the study of its artificial production in turn form cyanate of ammonia, which was the first blow to the theory of vital action as a necessity in the conversion of inorganic into organic matter.

These are but a few only of the questions of prime importance suggested by the mention of these well-known ingredients of this excretion, but they form but a small page in its chemistry as a whole in relation to medicine, and this but a chapter in the grand volume of physiological chemistry. Even the little deviations from its ordinary operations, which we know as pathological chemistry, can never be fully understood without a thorough knowledge of its normal laws in their widest application.

But it is not only in its relation to disease that the study of chemistry is of interest to the student Recent inquiries, directed by a few master minds, into the laws and phenomena of nature, have shown that a marvellous correlation exists not only between her creations, both animate and inanimate, but between forces hitherto considered distinct, bringing so-called physical laws into close connection or identity with those we call chemical, and throwing grave doubts upon the existence of any such distinct power as that called vital force. The study of animal chemistry has therefore come to occupy a position of great importance and interest in this connection, for it is through its aid that we can trace the mutual relationship existing between the phenomena of our vital existence and outside physical forces and their products, between our tissues and those manifestations of our higher and inner nature we call mind or intellect. These questions have excited the active interest of the highest intellects of our time. Their consideration has been impatiently snatched from the field of scientific observation, and made the subject of passionate discussion in public arena. Such opinions as the following could indeed hardly pass unchallenged.

Prof. Owen expresses his conviction that "vital forces are only ordinary physical forces, that inanimate matter is made into living beings by conversion of chemical into so-called vital action."

Odling says, "But what the physiologist means by vital force I have never been able to understand. So far as I can make out, it seems to be a sort of internal, intransferable, immeasurable, self-originating power, which performs nutritive acts by its absolute will and pleasure, as if it were not abundantly manifest that the growth of a plant and incubation of an egg cannot be performed without a direct supply of external force. * * * Seeing then that the enormous number and variety of animal and vegetable compounds are produced out of carbonic acid, water and ammonia, not by any peculiar vital force, but merely by the light and heat force of the sun acting through organic machinery, the question naturally arises, whether the chemist may not effect in his laboratory-machinery a similar intercombination of deoxidized carbonic acid and water, either by a direct application of sun-force, or indirectly by the aid of those terrestrial transformations of sun-force, which are so abundantly at his disposal. This question, decided absolutely in the negative so long as the fiction of vital force tyrannized over men's minds, has of late years received a rapid succession of brilliant affirmative replies. Already hundreds of vegetable compounds, heretofore produced only in living organisms, and, as was supposed, put together and held together by vital force, have been formed by the chemist in his laboratory. * * We see no reason to question the chemist's ultimate ability to reproduce all animal and vegetable principles whatsoever."

There are those, however, who do not stop here, content with thus referring our merely animal functions to the general chemical and physical laws which govern all matter, laws which make no distinction in their control over the growing crystal and the human fœtus, but would apply the same explanation to those intangible manifestations of consciousness, will, and intellectual power, which we have so long looked upon as within us and not of us, far removed from any connection with material phenomena, and which we call mind. The theory is a fair one, and we should not be scared from its contemplation now or its acceptance hereafter, if properly substantiated, by any cry of materialism or heresy it has stirred up. The same outcry has been resounding in ever narrowing circles from long before the days of Copernicus and Galileo. If it had been heeded our knowledge of geology would still be confined within the scriptural statement, and our acquaintance with man's previous existence on the earth limited by the records of a restricted archæology. It has been the never failing opponent of all progress in natural science, but its influence has perhaps been more beneficial than otherwise, as it has served as a healthy stimulus to observers. We should never let it deter us therefore in our investigations of the laws of nature, or hesitate to accept the path their proper interpretation points for us, over whatever dogma it may lead. A search for truth in an honest spirit of inquiry will never lead us to wrong, as we follow only where the Creator has been before.

Thus we shall be prepared to receive in the spirit in which they are written these words of Prof. Huxley in his lay address on Protoplasm or the physical basis of life. "In physiological language all the multifarious and complicated activities of man are comprehensible under three categories. * * * Even those manifestations of intellect, of feeling, and of will, which we rightly name the higher faculties, are not excluded from this classification, inasmuch as to every one but the subject of them, they are known only as transitory changes in the relative positions of parts of the body. * * * Carbon, hydrogen, oxygen, and nitrogen are all lifeless bodies. Of these carbon and oxygen unite in certain proportions and under certain conditions, to give rise to carbonic acid; hydrogen and oxygen produce water; nitrogen and hydrogen give rise to ammonia. These new compounds, like the elementary bodies of which they are composed, are lifeless. But when they are brought together under certain conditions they give rise to the still more complex body, protoplasm, and this protoplasm exhibits the phenomena of life. I see no break in the series of steps in molecular complication. * * * If the properties of water may be properly said to result from the nature and disposition of its component molecules, I can find no intelligible ground for refusing to say that the properties of protoplasm result from the nature and disposition of its molecules. But I bid you beware that, in accepting these conclusions, you are placing your feet on the first rung of a ladder which, in most people's estimation, is the reverse of Jacob's, and leads to the Antipodes of heaven. It may seem a small thing to admit that the dull vital actions of a fungus, or a foraminifer, are the properties of their protoplasm, and are the direct results of the nature of the matter of which they are composed. But if, as I have endeavored to prove to you, their protoplasm is identical with, and most readily converted into, that of any animal, I can discover no logical halting-place between the admission that such is the case, and the further concession that all vital action may, with equal propriety, be said to be the result of the molecular forces of the protoplasm which displays it. And if so, it must be true, in the same sense and to the same extent, that the thoughts to which I am now giving utterance, and your thoughts regarding them, are the expression of molecular changes in that matter of life which is the source of our other vital phenomena. * * * Every word uttered by a speaker costs him some physical loss; and in the strictest sense he burns that others may have light. So much eloquence, so much of his body resolved into carbonic acid, water, and urea. * * * * Two things are certain: the one that I hold these statements to be substantially true; the other that I, individually, am no materialist, but on the contrary believe materialism to involve grave philosophical error."

I have thus quoted from some of the most daring and yet soundest thinkers and keenest observers, to show the tendency of modern belief in these directions, and to illustrate how intimately the study of animal chemistry is connected with some of the most profound problems of life. In fact, the conclusions they advance are founded in detail almost wholly upon the observations of the latest German workers in physiological chemistry, and none but those prepared by study to judge the accuracy of the latter, are competent to decide how far the deductions of the former are justified. They are questions, however, about which all the intellectual world is talking, and too large a portion of it writing. Protoplasm has succeeded Darwinism, and later the Correlation of Forces, as the pet theme, and a great deal of nonsense is said and written about it. The thought of vast beds of homogeneous *Urschleim*, the matrix of sub-embryonic life, the unshaped beginning of the fauna and flora of future epochs, lying beneath the silent and solemn depths of ocean, is indeed calculated to startle the reason of men of science from its accustomed channels, and excite the interest of the least thoughtful. You will find yourselves often called upon, no doubt, as professional men and students, to explain or offer an opinion upon this or that statement in the controversies which have arisen and are to follow, but you will be able to make but a poor response, unless you have made yourselves familiar with the details of the data upon which the whole question is based, and which concern you so deeply in other relations.

I would have chemistry taught, then, in its widest application possibly consistent with the student's period of study; in its fullest bearing upon and as the most important means in the study of physiology; in its relation to materia medica, the incompatibility and physiological action of drugs; as the basis of toxicology, and its important services to medical jurisprudence; and, finally, for the superior and exact mental training it affords to a profession sadly needing it, and for its irresistible guidance of the student into the ever-widening paths of general science and a broader culture. I would have the student taught all this, not as if it were to be the end of its study, but as the beginning of independent work on his own part in one or the other of these directions, so that his life may have given something to science in return for the much he has received from the labor of others.

And such is the spirit I would see carried into all your studies. I would have you dispossess your minds of the too common belief that everything can be learned at the bedside; it is a fatal barrier to individual and national progress in medicine. Nothing can be gained there but the shallowest, routine acquirements, until the senses have been taught how to investigate, and the mind prepared, by long and diligent study of the normal laws of life, to comprehend the phenomena of disease there presented. Even when thus trained, you will find that much of the first importance cannot be gained by bedside studies. Man has been looking at his sick brother now for centuries; he has learned the interpretation of many symptoms, and the pathological changes of structure and disorders of function thus indicated, but what has he learned there of their causes, and how little of means to cure! Medicine has accomplished but little yet of its possibilities for the benefit of mankind. I may venture the prophecy that its grandest discoveries are waiting outside the sick room; that in his surroundings, the air he breathes and its unseen inhabitants, the foreign elements which make his food and drink, the soil upon which he dwells, lie hid the obscure causes of pestilence and contagion. They will not reveal themselves by watching their effects, nor will they cease to do their accustomed evil in the world, while the present narrow system of exclusive clinical investigation is adhered to. There is of course nothing new in this prediction; we are all familiar with such views, and all believe there may be something in them, as we say, and there stop. But where do we see put in operation in any systematic and large way, and by competent observers, those investigations which would sooner or later test their truth? Where are our students taught, as they should be, the laws of hygiene, and made acquainted with the lowest forms of organized existence, without which knowledge their explorations may result in such pretentious exhibitions as have lately been forced upon public attention to the discouragement of future intelligent observation in the same field!

I cannot refrain from quoting from Prof. Huxley's address before the British Association for the Advancement of Science at Liverpool a few weeks ago, on the germ theory of life. "I commenced this address," he says, "by asking you to follow me in an attempt to trace the path which has been followed by a scientific idea, in its long and slow progress from the position of a probable hypothesis to that of an established law of nature. Our survey has not taken us into very attractive regions; it has lain chiefly in a land flowing with the abominable, and peopled with mere grubs and mouldiness, and it may be imagined with what smiles and shrugs, practical and serious contemporaries of Redi and Spallanzani may have commented on the waste of their high abilities in toiling at the solution of problems which, though curious enough in themselves, could be of no conceivable utility to mankind. Nevertheless you will have observed that before we had travelled very far upon our road there appeared, on the right hand and on the left, fields laden with a harvest of golden grain, immediately convertible into those things which the most sordidly practical of men will admit to have value, viz., money and life. * * * * Looking back no further than ten years, it is possible to select three in which the total number of deaths from scarlet fever alone amounted to ninety thousand. That is the return of killed, the maimed and disabled being left out of sight. Why, it is to be hoped that the list of killed in the present bloodiest of all wars will not amount to more than this! But the facts which I have placed before you must leave the least sanguine without a doubt that the nature and the causes of this scourge will, one day, be as well understood as those of the Pebrine* are now; and that the long suffered massacre of our innocents will come to an end. And thus mankind will have one more admonition that 'the people perish for lack of knowledge;' and that the alleviation of the miseries, and the promotion of the welfare, of men must be sought, by those who will not lose their pains, in that diligent, patient, loving study of all the multitudinous aspects of nature, the results of which constitute exact knowledge, or science."

But what can be done to correct the failings of medical education in America, to elevate its tone, to stimulate the cultivation and teaching of science, to place our schools on an equality with those of Europe, with other departments of learning at home? In the absence of any general central power such a change can be effected, I believe, by no concerted or enforced action on the part of the schools, for they are too numerous and are governed by too diverse and independent motives of interest to unite in any practical scheme of reform. Each must act for itself, and stand or fall as its policy proves to be wisest or not in the end. We are responsible therefore only for ourselves, and the question reduces itself to the relation of Harvard University to medical education, to the duties of you its students, of us its representatives in the medical department. Your own obligations to the future of the profession, to the school, and to yourselves, I have tried to place before you in what I have said; but how can we, who are answerable for its more immediate success, respond to that new vitality which, radiating from the collegiate centre shall freshen all the other departments to unwonted activity? How can we contribute our share to the common purpose of making our alma mater in all her schools the head of education in America, a true University of the first class?

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* Vine disease.

First, we might insist that students should come better prepared by previous intellectual training and by the study of such preliminary branches as general chemistry, physics, botany, and the Latin, French, and German languages, to comprehend at once the higher lessons of applied science. Secondly, that they should remain connected with the school throughout their whole period of study; that the lectures should not be crowded into four months' space of over-work, but blend with the present summer course of instruction in a harmonious and far more useful scheme; that the students should be divided into classes by years, and be required to follow the gradation of studies adapted to such classification; and that the whole time of study be prolonged one or two years, as in foreign schools. Thirdly, that no student should receive a degree in medicine, until he has passed a satisfactory examination in every branch that is taught in the school.

Such are the measures which in time would raise an American Medical School to an equality with the best elsewhere; they can be, and, I trust, will eventually all be carried out; but what would be the immediate result, if the government of the University should ordain such a revolution in the American system? An analysis of the list of those who attended lectures last year shows that of 276 students but 62 had received a previous collegiate education, so that probably not more than a quarter of the whole could have met the required terms of admission; next, that but 92 of the whole number were connected with the summer school during any part of their whole course of study, and this represents fairly enough the proportion of those whose circumstances would permit a constant connection with the school, even for a three years course; were it prolonged, even this estimate might be too high. We may conclude then that such a reform would inevitably be followed by the immediate loss of two thirds of its present number of students, by an equivalent crippling of its material resources, and the sacrifice of the prestige of a large school. It is evident therefore that without other means of support than those now at command the school could not be carried on.

But if on the other hand such means were provided, what would be gained to counterbalance that which would be lost by such a reformation? In the first place we should be able to systematize our instruction, now wholly impossible when individuals may begin their studies at all times; for when the third year student and the beginner without the slightest preliminary knowledge of chemistry, for instance, are to be found in the same recitation-room, it is evident that such instruction must be far above the understanding of the one or as far below the requirements of the other. We should equalize the value of our degrees, which are now most unfair in their significance, while no distinction is made between the student who only sits more or less of four months in our lecture-rooms and those who have been under our personal guidance for three entire years. Now Harvard University puts the same stamp of approval and warranty on both. And we should enhance the value of our degree a hundred fold. As it became known that this school had ceased to compete with others in a system so well adapted to make the most rather than the best physicians, that it required a certain preliminary training before it received students, and kept them long enough to educate them thoroughly before it let them go, and that its degree meant something quite apart from that of other schools, this certificate from the oldest university in the country would be sought by the best class of students from all its parts, as is that of its other departments, and its graduates would at once assume a distinctive position in the profession. This would force the best existing schools in turn up to a higher level, and thus the character of medical education would be gradually rescued from its present deplorable condition. Such, I believe, would be the happy results of such a reform. Such a reform, too, would best come from a school which was the first to establish the summer session, and has inaugurated within a few years other changes in the system of medical instruction, by which it has not only greatly improved itself, but the schools of other cities also which have followed its lead.

But if we cannot with our present means immediately effect so great a change, we can at least and at once take some of the steps above alluded to. If we cannot make it obligatory, we can make the summer course so instructive that students will be drawn to spend the whole year in the school. We can encourage a love of science and the habit of independent investigation among them. We can insist that the student shall pass a satisfactory examination in every department, before he can obtain a degree. If these branches, each and all, are considered an essential part of medical education, of course no person is fitted for practice, until he has acquired the slight knowledge of them necessary to pass the examination at any of our schools. Yet the university now publishes, with other inducements to the student, the offer that he need prepare himself in but five out of the nine departments taught. How, with so wide an opening for escape kept standing before his eyes, can we expect him to know anything of the branches not directly connected with practice. Finally, we can encourage the beginning of any movement tending to the consummation of any or all of these changes.

The last public ceremonial in the Annals of the University before this of to-day was the laying of the corner-stone of a memorial in commemoration of her sons who met heroic death in discharge of man's noblest duty. It is a monument to the dead, but for the living. While it rises, and as long as it continues to stand, it should be to all, student, teacher, graduate, the same memento; that the spirit which led them in the hour of their country's peril to offer their lives to her, should be none the less ours in the safe and easier future they have left us; a spirit of devotion, of self-sacrifice if need be, to the highest duties, towards the noblest ends—not reserved for public and exceptional display, but to be the ever constant motive in the doings of daily life. To show how we may best discharge our present obligations to humanity and to the cause of medical education in America, has been the motive of this address.

ADVANTAGES OF FOREIGN STUDY TO AMERICAN MEDICAL GRADUATES.

By Edward Wigglesworth, M.D., Boston.

"Home-keeping youth have ever homely wits," and we trust that, among medical students at least, no one can be found ignorant of the advantages to be derived from a more extended experience. To show the necessity of improving these advantages, in what they consist, where they may best be sought and how, is the object of these few words addressed to American medical students about to graduate.

We all appreciate thoroughly the enlarged, cosmopolitan and eclectic views of our revered professors, who "prove all things and retain the best," but *exemplo plus quam ratione vivimus*, and however good our theories may be, we need actual experience also to fit us for our career. *Experientia docet*, and we should compare the experiences of many men and under varied conditions. We should study disease under different climatic influences, under the influence of different temperaments and of different habits of life. We should compare the maladies of widely separated lands, and endeavor to ascertain the causes of their dissimilarity. Are we to be general practitioners? Consider the responsibility of taking into our keeping the life of a fellow human being and the happiness of his friends. It is not enough to feel that we have done all that we could for his benefit; we should wish to feel that we have done all that any one could. Are we to be specialists? Science, thanks to the mechanical discoveries of the last few decades, has now progressed so far that it is impossible for any one man to master thoroughly all branches of medicine, and we should wish, after, it being distinctly understood, a thorough general course, to study our specialty in that place where, from any reason, this specialty has been most completely investigated. And bear in mind that the specialist must never neglect general extension of knowledge while devoting himself to intensifying his acquaintance with a particular branch. His rule of conduct is addition, not substitution.

In what do the advantages of foreign study consist? Generally, in the age and experience of Great Britain, the systematic method and accurate analytical investigation of Germany, and the bold experiments of France. Particularly, in the fact that whereas republics are slowly and unwillingly forced into establishing imperfect institutions by voluntary contributions, despotism compels at once the perfect formation on a grand scale of that which is seen to be needful. In La Charité at Berlin and Allgemeines Krankenhaus at Vienna may be found under one roof every department of medicine, and the entire quarters in the neighborhood of these grand hospitals are given up to medical students, who thus save every instant of time, passing directly from one lecture or clinique to another.

Moreover, the dense population of Europe, the poverty of the lower classes and the low tone of morality cause, first, aggravation in the forms of disease; then, an only too great willingness to seek the support of public institutions; and, finally, a perfect submission to the will of the physician, unknown in a land where independence and modesty are carried often to a degree incompatible with common sense. Here the patient is the first consideration, the disease the second; in Europe the disease is the only consideration. We state merely facts. Our business now is simply with the "what is," not with the "what ought to be."

Scire ubi aliquid possis invenire, magna pars eruditionis est. Let us therefore consider what things we cannot find at home and where we are to look abroad to remedy these deficiencies. And here we should say that it is merely to the more advanced age of foreign institutions, to their superior advantages in regard to number and quality of patients and endowments of money that we refer, for in intellectual capacity we consider our "Faculty" inferior to none. In surgery, in fact, we stand in the van, for here American foresight, presence of mind, versatility and inventive ingenuity, combined with manual quickness and dexterity, give us a preëminence over all others.

We lack, however, the gigantic museums of Europe, with their numerous and varied specimens. We lack its immense chemical laboratories, where whole classes work under the constant immediate supervision of a professor. We lack its hospital wards devoted solely to obstetrics, where the student may pass whole nights delivering all cases, and, under supervision, performing all operations. One of our friends has seen nearly thirty cases during a single night in Vienna, and we ourselves, *manu propriâ*, have delivered eleven cases in the same time. Here also difficult deliveries, with operations, are performed by both professor and students in public before the whole class, and, thanks to self-interest, preference is generally given to the foreign student. In clinical medicine the Vienna system is admirable. Each patient on admission is assigned to two students, who make the examination and diagnosis, prepare full reports of the case to be read before the class, and are responsible for the whole direction and care of the sick person. This is all done, however, under the ever watchful eye of the professor attending, and both Skoda and Oppolzer spend perhaps one to two hours over a most thorough lecture upon their important cases.

With regard to diseases of the skin and syphilis, whole hospitals abroad are devoted exclusively to these subjects. Women as well as men are in Vienna completely denuded of all clothing for examination by the professors and students; and the comparative advantages of all methods of treatment are accurately investigated. Whole wards are devoted to variola. In Vienna the mortality is hardly three per cent., and pitting is rare.

Ophthalmology, otology, laryngoscopy, &c., and microscopy receive as much attention as with us surgery or clinical medicine, several professors devoting their exclusive attention to each of these branches. In short the student's sole difficulty will be *l'embarras de richesses.* In dentistry, however, as in surgery, America holds an enviable preëminence.

Let us examine now in detail what each great European city offers us and under what professors of world-wide reputation we can study.

The first medical school in the world at the present day is indisputably that of Vienna. Let the list of its "Faculty" speak for itself. Anatomy, Hyrtl; Descriptive Anatomy, Friedlowsky; Practical Histology, Wedl; Path. Anat., Rokitansky; Anat. and functions of brain and spinal marrow, Meynert; Physiology, Brücke; General and Experimental Pathology and Microscopy, Stricker; Electrotherapeutics, Benedikt; Clin. Med., Skoda and Oppolzer; Auscult. and Percuss., von Schrötter; Laryngoscopy, Rhinoscopy, &c., Ditto and Störk; Surgery, Billroth, von Dumreicher, Mosetig and Weinlechner; Operations on the Urinary and Sexual Organs, Dittel; Otology, Politzer (Adam) and Gruber; Ophthalmology, Arlt and von Jaeger; Obstetrics, Braun, Späth and Mayrhofer; Dis. of Children, Widerhofer, Fridinger, Pollitzer (Max); Dermatology, Hebra, Auspitz, Neumann, Kohn (Moritz), Wertheim; Venereal Dis., Sigmund, Zeissl, Kohn (Emanuel); Chemistry, Heller. Lack of space prevents us from enumerating the many and various sub-divisions of these general branches and the numerous and able instructors in them, Voigt, Klob, Patruban, &c. &c.

The University of Berlin takes the first rank in the world. The medical department is however inferior to that of Vienna. Comp. Anat., Reichert; Osteology, Lieberkühn; Physiology, du Boir Reymond and Rosenthal; Spec. Path. and Therapeutics, Hirsch and Frierichs; Pathology, Virchow; Laryngoscopy, Tobold; Venereal Diseases, Lewin; Surgery, Langenbeck and Rose; Clin. Med., Traube and Frierichs; Chemistry, Hofman; Nervous Diseases, Westphal, &c. &c.

Third on our list, *proximus huic, longo sed proximus intervallo*, comes Paris; but, alas! *Roma fuit.* Paris has "fallen from its high estate" of 30–20 years ago. France like America suffers from a lack of centralization of her medical talent. She has attempted to maintain three schools of the first rank, one at Paris, one at Montpellier, and one at Strasburg, and has therefore failed in all. The school at Paris still offers inducements to students from its immense mass of material, but the instruction is inferior to what it should be. Paris has receded, while Germany has made immense strides forward. This is due chiefly to the fact that, while Vienna and Berlin are ever solicitous to absorb all the talented men of the country by the proffer of superior emoluments, Paris not only does not do this, but actually drives away all young men of ability with a narrow-minded conservatism and jealousy which does discredit to her entire medical "Faculty." Add to this that in Paris, as in London, the hospitals, dispensaries, &c., are often miles apart, while the hours for visits and lectures are the same in all. A student is thus sadly restricted as to opportunities and compelled to waste much valuable time. Paris, nevertheless, offers certain advantages to the specialist. Surgery, Broca at La Pitié; Maisonneuve at Hotel Dieu; Verneuil at Laroboisière and Reverdin at La Charité, the first to transplant epidermis to old ulcers. At the Neckar Hospital Desormeaux, inventor of the endoscope; Opthalmology, Liebreich, the probable successor of von Graefe at Berlin; Nervous Diseases, Brown-Sequard; Laryngoscopy, Fauvel; Diseases of Children, Roger; Pathological Anatomy, Cornil; Physiology, Claude Bernard and Ranvier; Dermatology, Lallier, Basin, Hardy, Guibout, Hillairet, Vidal and Paul, all at St. Louis; Venereal, Fournier, at Lourcine (Women), and Liegeois and Simonet, at Midi (men).

London.—Hospitals separated and the student must attach himself to one of the three schools at University College Hospital, at Guy's, or at St. Bartholomew's, and pay for his courses; whereas on the continent the larger part of the instruction is gratis. Ovariotomy, Spencer Wells at Samaritan Hosp.; Clin. Med., Wilson Fox (Univ. Coll. Hosp.), and Murchison (Middlesex); Surgery, Sir. Henry Thompson, Christopher Heath (Univ. Coll.), Paget (Bartholomew's), Fergusson (King's College); Dermatology, Tilbury Fox (Univ. Coll.), and Hilton Fagge (Bartholomew's).

Edinburgh.—Surgery, Lister (Surg. Infirmary); Uterine Surgery, Keith; Anat. and Comp. Anat., Pettigrew.

Dublin offers peculiar advantages to the obstetrician, and students would do well to study here the theories which he will afterwards apply in Vienna. The chief lying-in Hospital is the Rotunda under the able supervision of Drs. Johnson and Maddon. To the ability and kindness of Dr. Maddon many in both hemispheres will eagerly bear witness. A valuable work by him on diseases of women will soon be published here. In the Rotunda there are 1000–1500 births per annum, according to the abstract of the Registry. Students receive cases in and outside of the Hospital, and are held strictly responsible for them. To become a licentiate in midwifery, six months attendance is necessary, and then an examination must be passed before the master and two assistants. The Stevens Hospital is also for diseases of women. So also various dispensaries. At Trinity College, Sinclair on Midwifery and R. Smith on Surgery. At the Hardwick Fever Hospital, H. Kennedy. The weekly meetings of the Dublin Pathological Society, free to all, are of special interest.

Munich.—Anatomy and Histology, Rüdinger, at the "Royal Anatomie." Surgery, Nussbaum (Gen. Hosp.). Laryngoscopy, Oertel. Dermatology, Lindwurm and Dittrich. A fine Orthopedic Hospital lies just outside the city.

Heidelberg.—Moos on Otology and Friedreich on Dermatology. At Würzburg, Scanzoni on Obstetrics, Recklinghausen on Pathological Anatomy, and Kölliker on Histology. At Bonn, Rindfleisch and Max Schultze on Histology. At Jena, Hallier. At Leipzig, Ludwig on Physiology. His laboratory is the best in the world, with most elaborate and extensive apparatus, animals gratis and most careful instruction. Prague, Seiffert on Midwifery; Waller and Petters on Dermatology. Famous also for diseases of children. (*Vide Viertel-Jahres Schrift.*)

To save time, learn at least the grammar of the language of your intended place of residence, before starting. Then take passage to Hamburgh or Bremen, second class $72 gold. Going also as steerage passenger is now rapidly becoming fashionable. On arriving go to Brunswick, Hanover or Dresden, and enter a German family, avoiding all intercourse with English-speaking people. In three months you may go to Vienna or Berlin, and begin your studies. Courses begin in Vienna on April 1st and middle of October; in Berlin or Paris, the first week in April and November 1st. Take out a matriculation ticket which more than pays for itself by cheapening courses. In Berlin, students on presenting these tickets are admitted at half-price into the theatres, one of the best modes of acquiring a new language. Go to the Janitor at the Hospital and get catalogues and all other information. Living in Great Britain is not much cheaper than here. In Paris prices are half the English ones, and in Austria half the Paris, following the unit of currency, penny (2 cents), sou (1 cent), kreuzer (½ cent). In Vienna, one can live, *crede experto*, on $20 per month, everything included, and on $32 both the writer and other friends have "fared sumptuously every day." Our most earnest advice is, therefore, go abroad and stay as long as possible at all sacrifices; you will never regret it. The progressive West sends annually a noble quota; let the conservative East not tarry too far behind.

Selected Papers.

A WORD TO STUDENTS.

Among the difficulties with which the student just entering on his career has to contend is a want of knowledge how to set to work with most advantage. The discipline which enables him later on to turn to any subject at a moment's notice has yet to be acquired—he is apt to be fitful instead of systematic. As men advance in life, habit acquires more and more power over them, and above all things, therefore, is it essential that the habits of work should be good. The plans adopted in early life gradually shape themselves into some system, good or bad, in after life, and success in no small degree depends on the character of this system.

To practise medicine aright, one must continue a life-long student; it is only the basis of the superstructure which can be acquired during the few years spent in the Medical School. From the day of entry, therefore, the student should set vigorously and earnestly to work—not too hard at first, for this not unfrequently ends in disgust, but steadily, until the irksomeness of the task wears off, and use becomes a second nature.

In the established order of things, lectures play a most important part; it is not our intention, meantime, to argue whether this should be so or not, but, accepting matters as they stand, it is advisable for the student to utilize these to the utmost. Much harm has been done by inveighing against lectures and lecturers, but it should be remembered that lecturers are, as a rule, skilled teachers; that their lectures consist of the essence of the knowledge they have spent years in acquiring; that they can explain, illustrate, and impress their meaning; they know the points of special importance, and can insist upon them; in short, they are living powers—books but a dead abstraction. One thing too much in vogue, and most prejudicial to the student, is missing lectures; we do not speak of the evil effects morally merely, but also of the actual loss the student sustains; the key-note to the next week's work may have thus been lost. By close attention and assiduous attendance, the student, if he has a good teacher, may acquire an enormous amount of information; but as yet he holds it loosely—he has not made it part and parcel of himself. To ensure this end, home work should go hand in hand with school work; the work of the evening should supplement and complete that of the day. In each subject the student should have a well-selected text-book; as a rule, it is better to read one than several; and in this in the evening he should recapitulate what he has heard during the day. The text-book should neither take the place of the teacher nor the teacher that of the text-book, but the one should be the correlate of the other. Neither would we advise the student to read on in advance of the lecturer. Such a plan is dangerous, for it is always more difficult to unlearn than to learn; the aspects of science change fast, and no book can long be up to the latest date; it is better, therefore, to allow the teacher to lay down the accepted belief; the student may compare it with that expressed in his book, and, if the two are found at variance, he may seek an explanation which a good teacher will be only too happy to afford.

When dealing with the more practical subjects, such as Medicine and Surgery, ward-work and home-work should go hand in hand. We counsel every man to see everything he can see with his own eyes;

to do everything he can do with his own fingers. But it is hardly possible for him to encounter every form of disease or injury during his pupilage. Something must be left to reading, especially that which regards the principles of his art. But whenever a form of disease is being studied, a case in a ward and a good description in a text-book will mutually complement each other, greatly to the student's present benefit and lasting good.

The course we advocate, therefore, is that of steady industry—no fits and starts. Above all, let men doubt that genius whereby some are supposed intuitively to pick up knowledge; rely upon it that the real genius in medicine is hard work. And this steady industry is valuable, not alone in the results it brings about, but, above all, in the habits it induces. It marks a man with a life-long impression. Habits of accuracy are as easily acquired as are those of inaccuracy. In time it is easier to be industrious than idle; and, as the child is father to the man, so is the industrious student the sure precursor of the successful practitioner.—*London Medical Times and Gazette.*

MEDICAL ETHICS.

* * * * Medical Ethics are nothing else than particular cases of general ethics. We have got on very well up to this time without any code of medical ethics—although it is possible we might get on better with one—because they consist in nothing more than the application of the principles of justice and honor to circumstances frequently arising in medical practice. There is no conceivable case of differences which might be supposed to call for the application of such a code as we speak of, that cannot be settled by the logical application of these broad principles. It is very mistaken and very mischievous to think and to say that these principles are one-sided, or that they act for the benefit of the practitioner and not of the patient. If they did so, they would be principles, not of justiee, but of injustice; they would be opposed to ethics. Let us take an example, such as this correspondent suggests. Is it according to medical etiquette for a practitioner to see a patient under the care of another medical man, and to take part in the treatment, or to animadvert upon it, during his absence, and without giving him notice? To answer this question it is only necessary to translate into wider terms—to make the case general, instead of particular. Is it right to give a decision upon which health depends, without having all the existing elements of judgment at command? This, so far as the patient is concerned. Is it right to express an opinion, possibly hostile and injurious, upon the skilled and technical proceedings of a man, upon data furnished by an unskilled and interested bystander, who cannot possibly understand all his reasons of action, and who is exceedingly likely to give a very inaccurate account of that action? But is it wrong under all circumstances, according to professional etiquette, to give temporary advice and assistance to a patient under treatment, during the absence of the practitioner in ordinary attendance? Let us translate this, again, into broader terms. Is it wrong to do to another as you would have him do to you, and for another as you would have him do for you? It is and must be right to meet an emergency, when it is real, by relieving pain and distress, mental and bodily: it must be wrong to use such an emergency and to pervert such motives of action by using them to injure or supplant an absent man. Once more: Is it right according to etiquette, for one practitionor to take charge of a case already partly treated by another, who has been summarily dismissed? This, too, may be translated easily, and then answers itself. Is it right for a man to do his duty honestly? The duty of a practitioner of medicine is to honestly use his skill for those who honestly ask it, on agreed terms of remuneration. He may, however—and, if a man of honorable spirit, he will—refuse to take up an unfinished piece of work in which his predecessor has been treated coarsely or unfairly by the person who now claims his aid by virtue of a tacit compact. That compact has obviously two sides. The claim for medical assistance is correlative with the duty of fairness and right conduct to those who give it; and so the demand on any man to give medical assistance can hardly ever be so urgent as to call upon him to waive his right to insist upon the observance of that correlative condition. He may and ought to object to be made a party to an act of injustice, if injustice there be. While, then, the rules of etiquette to meet the variety of cases which occur under this head could hardly ever be sufficiently numerous to meet all the varieties of life, the general ethical rule, fairly and honorably applied, will always meet the demands of professional honor, which does not differ from abstract honor; and satisfy also the demands

of humanity. * * *—*British Medical Journal* (Editorial), Sept. 24, 1870.

PLAIN TRUTH TO MEDICAL STUDENTS.

The medical student of 1870 enters upon a career beset with difficulties but studded with rewards. The heir of centuries of research and devotion, he has to bear the weight of responsibilities ever increasing, and to uphold a standard which must be borne yet higher, and over steep and difficult paths. A higher national standard of education requires that he shall bring to his special studies the culture befitting a liberal profession; and the increasing application of exact modes of diagnosis and research in treatment demands, at his hands, an acquaintance with branches of science collateral to medicine, formerly not generally required. On this subject it is right to speak very plainly. Notwithstanding improvements in the standard of preliminary educational requirements, our licensing bodies are perforce at this moment with a second-rate standard of mere schoolboy acquirements, which is by no means equal to the just demands of medical science, and which affords a very insufficient guarantee for the future of our profession in this country. The lamentable mediocrity of preliminary acquirements which they accept is the real hindrance to the progress of medicine as a science in this country. It is unnecessary to dissimulate the truth. The miserable inferiority in scientific research, the dearth of original work, the want of exactness, the poverty of physiological investigation, the ignorant impatience of "unpractical detail" which we all have to deplore so much in the mass of professional work at this day, are due to the inadequate preliminary cultivation of our students, to their defective training in scientific method, the small base on which the pyramid of medical lore is made to stand. The solemn deprecation of excessive devotion to microscopic research; the empty sneer at chemical physic; the idle and mischievous disregard of instruments of precision—the sphygmograph, the thermometer, the laryngoscope, the ophthalmoscope—are all the expressions of a Philistine ignorance. There is one enemy against which the English student needs to be earnestly cautioned—it is what he calls his "common sense." It is almost as dangerous at the outset as that nondescript cloak of contented ignorance which often makes him in after life an enemy to science and a danger to mankind, and which he then calls his "experience." As a student, we beseech him to trust to nothing but hard-going laborious cultivated research and study. He cannot be too earnestly warned to fit himself for his work by a thorough mathematical training, by a sound knowledge of languages, by real mental discipline acquired in a working devotion to natural science. It is on this basis that he must build his clinical aptitude and judgment. The inferiority of English to German medicine is due to this inferiority of preliminary training. We earnestly counsel all students into whose hands these pages will fall to ask themselves how far they are fitted to undertake the career which they are about to enter.—*British Medical Journal.*

Medical and Surgical Journal.

Boston: Thursday, November 3, 1870.

Fellow Students: The Editor of the Journal departs to-day from his usual course and devotes the present number entirely to your use. We feel sure that you will welcome the Address of Prof. White, to which you listened yesterday, and that its valuable suggestions will take a firmer hold in your mind on careful perusal. We have placed before you some extracts from foreign journals written for the students of Great Britain, as well as a series of choice quotations from some of the living men of our own country. To those about to take their degrees, we heartily commend the advice contained in the communication on foreign study; the author has been for several years a resident of Europe, and is thoroughly conversant with the subject whereof he speaks. Our own experience warrants us in assuring you that the suggestions are sound, practical and valuable. In addition, we have arranged, in such form as we trust will be most available, various items of information concerning the facilities which Boston offers you to acquire a sound medical education.

You have already been welcomed as temporary residents to a community second to none in this country in refinement and cultivation, as well as in the rites of hospitality; and you are, in like manner, given the hand of fellowship by those who will be your brethren in an honorable and learned profession. Privileges are placed before you, at this time and in this city, for acquiring a preparation for the medical profession which are unsurpassed in this country. The Professors and other Instructors of the University offer you the results of long years of study and observation; younger men, interested in various specialties, are ready to aid you in special courses of lectures and instruction; clinical facilities, amply sufficient for the requirements of early medical study, open for you the book of nature in its healthy and diseased conditions; and incentives to study and careful research are placed freely before you. By a conscientious use, on your part, of these means of improvement, we hope to place you before the world as trustworthy physicians.

But, fellow students, we demand a certain return for the advantages we offer. We trust that you enter on your studies with a due sense of your own responsibility to yourselves and the profession; that you have prepared yourselves by mental discipline and a preliminary education, without which no instruction we can give you will avail to make you good and sound physicians. Your minds should be trained to careful observation of the facts which Nature will constantly place before you, both in health and disease; to analysis, which will give you precision in diagnosis; and to wisdom, which will give you a just estimate of the means to be employed, mental, moral and physical, for the relief of suffering. We hope that you come among us with a just sense of *the honor of the profession* on which you are entering, and with a firm determination to maintain that honor as a sacred duty. In your hands will be placed the keys of life and death; to you will be intrusted the dearest interests of many families of our land. Honorable has been the record of the profession in years gone by; equally honorable let it be in the generation which you represent. Have a due respect for those who have preceded you; hold in proper regard those other members of the profession—happily still with us—for the good they *have* done; and take the places they resign to you, determined not to be behind them in the future. Honor your profession, then, that your profession may honor you.

Then, *respect your patient.* It is an Almighty Power who places in your hands a part of His power; but only that you may use it aright. No matter what is the social position of your patient, no matter what is the interest of the case to which you are called, remember that your patient is suffering, and needs your best powers, your unremitting attention, your cordial sympathy. It was a noble remark of one of the surgeons of Massachusetts, when the rebel prisoner expressed his wonder at receiving kind attentions at his hands:—"You *were* my enemy, you are *now* my patient." Those men were actuated by the best feelings of our nature, who, in organizing the International Sanitary Commission, adopted as their motto, "*Hostes, dum vulnerati, fratres*;" and, when you are called to cases of disease and distress, look on your patient as a sufferer; put yourself in his place; *deserve* the position which makes the good physician the warmest family friend and his step the most welcome sound to the waiting ear.

Your year of student life may seem to you dull and monotonous; your years of early practice perhaps even more so. But do not during these years neglect the little things of medical life. Your professional life will not be a series of brilliant results, but rather a pathway filled with little incidents, the aggregate of which will give you a position, honorable or the reverse, as you may deserve it. Go on, then, and *do your duty,* relying on the dictates of your own conscience. Do not fear want of success in your calling; if you are of the right stamp, the world will bring out the ring of the true metal in due time. If you do not see a path to prosperity, *make one;* those about you will respect you as long as the means you take are honorable ones.

Honor, then, your profession; not as that which gives you your daily bread, but as the means of doing good to your fellow men; *honor your patient,* as the true humanitarian holds in proper regard a suffering brother, wherever he finds him; and *honor yourselves*, as you look for the esteem and regard of your fellows;—and thus we welcome you to the duties, the trials and the rewards of our calling.

THE TEACHER TO THE STUDENT.

"Your diploma, in declaring you to be regularly-educated physicians, not only proclaims that you commenced your education under teachers, that bade you own no master but truth, and imposes on you the obligation of continuing your education with an equally lofty aim, but it lays upon you the duty of practising the art of medicine, with the most rigid regard to the claims of right and honesty. The spirit, which dictates your studies, is to preside over your practice. The distinction, which your diploma confers on you, of being a regular practitioner, you are never to forfeit by any irregularity. And here, regular means honest and true; irregular, means dishonesty and deception."

"Such is something of the value and meaning of a Diploma. It is no mere decoration; no bauble. It is the symbol and standard of a profession, which you cannot estimate too highly. It is significant of all that is vital and true and noble in that profession. It is conferred upon you by those, who, when they give it, charge you never to act, or be, unworthy of it. It enrols you in the ranks of a long list of noble men, of every age and nation, making you the descendants of heroes and sages. It presents you with the confidence of the community, and declares that you will be worthy of confidence. It engages for you that your industry shall be commensurate with your strength; that your honor shall be above reproach; your honesty unquestioned; and your devotion to duty, bounded only by your opportunities."—E. H. CLARKE, M.D. 1860.

"The course of preparatory study, however, above indicated, will bring the student into direct contact with facts, with disease in its present living example, and so make him its witness. It will do this for him, when his mind is prepared for observation, and for reflection upon that which is presented to it, and so daily enable him to institute comparisons between that which he reads and sees, that authoritative inquest which is to result to him in truth, namely in all that truth to which he is at the time able to reach."—W. CHANNING, M.D., 1845.

"Let the student confine himself to what is established, and even then he will find infinitely more than any one mind can grasp or retain."

"If any man has need of sound judgment and a high sense of honor, it is the physician. He has the reputation as well as the life of his patient, as it were, in his hands; and no one is fit to practise who is not fully sensible of the position he has assumed. His patient often entrusts to him secrets that nothing would induce him to reveal but his earnest desire for health; he implicitly relies upon the honor of his physician, and what terms of condemnation are too strong for him who betrays the confidence."—J. B. S. JACKSON, M.D., 1848.

"Go into the field, armed with a detailed and thorough knowledge of lesion and disease in all its phases; of surgical expedients; of the few specific remedies, and of their uses; of the miraculous power of air and exercise, and proper food; of the applicability and agency of stimulus; of local and general depletive measures; of applications cold and warm, stimulant and emollient; of counter-irritation; and perhaps of a dozen of the most efficient drugs not specifics. These are more than you will be likely to require for a considerable period and a common practice, and with them you will do as much service to your patients as you would be likely to effect with an entire apothecary's shop, and with prescriptions two inches and a half in length."—H. J. BIGELOW, M.D., 1859.

"I have always thought that the fact that the profession has had amongst its noted men some of the finest intellects the world has ever seen, and acknowledged as such not only by the communities in which they lived, but also by posterity, is a strong proof of the capability of our profession to satisfy the intellectual cravings of the highest class of minds."—H. I. BOWDITCH, M.D., 1863.

"But to make progress in medicine, we must have something besides respect for the ancients. If we wish to imitate their example, we must go to the same source from which their knowledge was derived. The study of Medicine is the study of Nature; and if we abandon it, and neglect what is done in our own time, because it is new, we shall certainly retain all the errors which exist in Medicine, as well as the truths which it has acquired."—J. C. DALTON, JR., M.D., 1860.

"Medicine, sometimes impertinently, often ignorantly, often carelessly called 'allopathy,' appropriates everything from every source that can be of the slightest use to anybody who is ailing in any way, or like to be ailing from any cause. It learned from a monk how to use antimony, from a Jesuit how to cure agues, from a friar how to cut for stone, from a soldier how to treat gout, from a sailor how to keep off scurvy, from a post-master how to sound the Eustachian tube, from a dairymaid how to prevent smallpox, and from an old market-woman how to catch the itch-insect. It borrowed acupuncture and the moxa from the Japanese heathen, and was taught the use of lobelia by the American savage. It stands ready to-day to accept anything from any theorist, from any empiric who can make out a good case for his discovery or his remedy. 'Science' is one of its benefactors, but only one, out of many. Ask the wisest practising physician you know, what branches of science help him habitually, and what amount of knowledge relating to each branch he requires for his professional duties. He will tell you that scientific training has a value independent of all the special knowledge acquired. He will tell you that many facts are explained by studying them in the wider range of related facts to which they belong. He will gratefully recognize that the anatomist has furnished him with indispensable data, that the physiologist has sometimes put him on the track of new modes of treatment, that the chemist has isolated the active principles of his medicines, has taught him how to combine them, has from time to time offered him new remedial agencies, and so of others of his allies. But he will also tell you, if I am not mistaken, that his own branch of knowledge is so extensive and so perplexing that he must accept most of his facts ready made at their hands. He will own to you that in the struggle for life which goes on day and night in our thoughts as in the outside world of nature, much that he learned under the name of science has died out, and that simple homely experience has largely taken the place of that scholastic knowledge to which he and perhaps some of his instructors once attached a paramount importance."

"To the student I would say, that however plain and simple may be our teaching, he must expect to forget much which he follows intelligently in the lecture-room. But it is not the same, as if he had never learned it. A man must *get* a thing before he can *for*get it. There is a great world of ideas we cannot voluntarily recall—they are outside the limits of the will. But they sway our conscious thought as the unseen planets influence the movements of those within the sphere of vision. No man knows how much he knows—how many ideas he has—any more than he knows how many blood-globules roll in his veins. Sometimes accident brings back here and there one, but the mind is full of irrevocable remembrances and unthinkable thoughts, which take part in all its judgments as indestructible forces. Some of you must feel your scientific deficiencies painfully after your best efforts. But every one of you can acquire what is most essential. A man of very moderate ability may be a good physician, if he devotes himself faithfully to the work."

"So gentle was he, so thoughtful, so calm, so absorbed in the case before him, not to turn round and look for a tribute to his sagacity, not to bolster himself in a favorite theory, but to find out all he could, and to weigh gravely and cautiously all that he found, that to follow him in his morning visit was not only to take a lesson in the healing art, it was learning how to learn, how to move, how to look, how to feel, if that can be learned. To visit with Dr. Jackson was a medical education."—O. W. Holmes, M.D., 1867.

"But the work of observation is a hard work. Some of you will be acute observers from the start, and some of you may be very dull; but the observing powers of the best may be improved, and the apparently dullest man of all may astonish his friends by the keenness of cultivated powers. Still it is only by labor, and properly directed labor, such as medical schools intend to supervise, that the end is to be accomplished. In the words of one whom I hoped to see among us to-day, and whom as a boy I listened to at Cambridge, 'Difficulty, struggle, progress—this is the law.'"

"Make your study by observation. Following the rules of one writer, studying by the bedside of one practitioner, will only be enough to narrow your ideas, and cramp your progress. The sick recover with very different methods of treatment. You will learn more thoroughly by confining your observations to a single class of cases at a time, than by following the clinical visits of different physicians at the same time. You will obtain more useful knowledge by seeing the minor operations in surgery and the application of splints, than by crowding the amphitheatre to see the abdominal aorta tied. You will serve your patient better, if you can learn how to lift a lame leg, or compress the femoral artery, to reduce a hernia or get a grain of sand out of the eye, or teach some nurse how to make palatable gruel or a comfortable bed, than you will by naming accurately the ligaments of the cervical vertebræ, or counting and demonstrating the number of layers of fascia over a forty years' inguinal hernia. The little things are to be learned at the beginning, or they never will be learned. In the long days and evenings after the degree is attained, you will find time enough for the rest."

"Medicine is a science. It is based upon observation. He who is the most acute observer is the best practitioner. The collection of statistics will not make you acute observers. That is a useful part of the work, but by itself is of no value. Every sense must be cultivated, for the senses are not alike acute in all. One can tell by the eye, another by the touch, a third only by the tape, if the two sides of a chest expand alike. But he is the better observer who tries the three, and allows one to correct and conform the others. He is the best observer who can use one method, when the comfort and convenience of the patient will not allow the others."—C. E. BUCKINGHAM, M.D., 1868.

"The comprehensive and important position which our profession occupies has been reached by successive steps of unequal and hesitating progress. The general recognition of this fact cannot but stimulate effort, for on every side are still spread out uncultivated and fertile fields of study. It will be your duty to elevate your calling by more assiduous endeavors to improve yourselves. No faithful workman finds his task a pastime, but excellence of achievement may make it the source of pride and happiness. Exercising your own intelligence, making yourselves something more than the mere passive recipients of information, and by an elaboration independent of professional instruction converting that which you are taught into personal knowledge, you will acquire thorough training and preparation for a career than which none offers surer distinction or greater satisfaction."—R. M. HODGES, M.D., 1869.

"But whatever be the degree of perfection to which medical treatment may attain, its limitations are inevitable. Despite human efforts, death cometh to all by a divine decree. By a decree nearly as absolute disease cometh to all, and will continue to come while the earth lasts. The doctrine enunciated in this place, five years ago, that 'disease is a part of the plan of creation,' though at times assailed, has never been invalidated, and, better than any other statement, comprehends and explains the facts appertaining to human ailments. The primal causes of disease are manifold, hidden, and mysterious."—W. W. WELLINGTON, M.D., 1870.

"The profession of the healing art, divine in its origin, grave and grand in its scientific evolution, sacred and sublime in its ultimate functions, stands as a necessary part of the order of things, old as humanity, and inseparable from its existence upon earth; for when did not man suffer, and when did not his brother try to relieve him?"—DR. R. M. S. JACKSON.

"The comfort and the happiness of many people, for good or ill, are in your hands. Weighty, then, indeed, is the responsibility which, of your own free will, you have this day assumed."

"In the remote infancy of medicine they who took the Hippocratic oath swore by Apollo, the physician, and Æsculapius, and Hygeia, and Panacea, with purity and with holiness to pass their lives and practise their art. And the Code of Ethics adopted by our Medical Congress strictly enjoins upon you the cultivation of purity of character, and a high standard of morality."—J. A. MEIGS, M.D., 1870.

"I must conclude, but not without warning you (1) against one-sided views and unthinking routine; (2) against scepticism in Medicine. Do not think, however successful you may be in treating a disease as you see it, that your method is always and in all places a correct one. Think what a speck of time and space you occupy, and how well it may happen that elsewhere and at other times conditions may be modified, so that your experience seems to be contradicted. Again, do not lose faith in Medicine, but rather search out closely the conditions of its success. Diagnosis is, indeed, a great thing in Medicine, but it must not be such as contents itself with giving a name to a disease, but such as strives to appreciate wherein one case, or set of cases, differs from another."—C. HANDFIELD JONES, M.B. Cantab. F.R.S., in *Med. Times and Gazette.*

PRACTICAL INFORMATION.

The Medical School of Harvard University, North Grove Street. Most of the information desired by the student is given in the Announcement of the Course of Lectures issued by the Faculty of the School; a few items are repeated for ready reference and for the use of physicians who have expressed a desire to attend certain of the lectures.

The winter course of lectures commences on the first Wednesday in November (2d), and continues seventeen weeks. The summer session commences on the second Wednesday in March (13th), 1871. There are two examinations for medical degrees: the first on March 1st; the second on June 19th. The Medical Commencement is the second Wednesday in March (8th); the College Commencement is the fourth Tuesday in June. The requirements of graduation are extracted from the Statutes of the University:—

"Every candidate for the Degree of Doctor in Medicine must comply with the following conditions before being admitted to examination:—

"1. He shall satisfy the Executive Faculty that he is of good moral character, and has arrived at the age of twenty-one.

"2. He shall have attended two courses of lectures delivered at the Massachusetts Medical College by each of the Professors of the departments of Anatomy, Physiology, Chemistry, Materia Medica and Pharmacy, Morbid Anatomy, Midwifery, Surgery and Clinical Surgery, Clinical Medicine, and the Theory and Practice of Medicine; but if he shall have attended a similar course in any other College or University approved by the Executive Faculty, the same may be accepted in lieu of one of the courses above required.

"3. He shall have employed three years in his professional studies, under the direction of a regular practitioner of medicine. [Attendance upon the Summer School and one course of lectures delivered at the Massachusetts Medical College, entitles the student to a certificate of one year's study.]

"4. If he has not received a University education, he shall satisfy the Executive Faculty in respect to his knowledge of the Latin language and of Experimental Philosophy.

"5. He shall have given notice of his intention to the Dean of the Executive Faculty, four weeks previous to the day on which he presents himself for examination, and at the same time shall have delivered or transmitted to the Dean a dissertation, written by himself, on some subject connected with medicine.

"Those candidates who have at the Spring examination received from the corporation and overseers the final approbation, shall be admitted to the degree of Doctor in Medicine by the President of the University, at a public Commencement on the Wednesday next succeeding the day of examination. Those who may be approved at the Summer Examination shall receive their degrees and diplomas in Cambridge on Commencement Day" [June 27, 1871].

In order to give students the requisite time for attending the regular lectures, the complete course on Physiology, and other exercises of the Winter Course, many of the special lectures, recitations and demonstrations which have been offered in previous years, will be transferred to the Summer Term. The fees are as follows:—

Fees for Winter Course of Lectures,	$121.00
Fee for Graduation, - - - -	30.00
Demonstrator's Ticket (optional), -	5.00
Matriculating Fee, - - - -	5.00
Fee for the Summer School, -	100.00
Fee for the whole year, - - -	200.00

Use of Library and attendance on Hospitals and Dispensary, free.

Daily Order of Lectures, 1870-71.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
8 A.M.	M. G. Hosp.			M. G. Hosp.		Clarke.
9 A.M.	Hodges.	City Hosp. (Med Visit)	Ellis.	White.	City Hosp. (Oph. Visit.)	Clin. Conf.
10 A.M.	White.	Cheever. (Clin. Surg.)	Shattuck.	Jackson.	Surg. Visit.	Bigelow. (M. G. Hosp.)
11 A.M.	Bigelow.		Bigelow.	Bigelow.	Operations.	Operations.
12 M.	Buckingham	Shattuck.	Buckingham	Bacon.		
1 P.M.	Holmes.	Holmes.	Holmes.	Holmes.	Holmes.	
3½P.M.	Lusk.	Lusk.	Edes.	Lusk.	Edes.	Shattuck.
4½P.M.					Buckingham	
5–6P.M.	Prac. Anat.	Prac. Anat.	Prac. Anat.	Prac. Anat.	Prac. Anat.	

The Demonstrator will be present in the Dissecting Room every afternoon.
Eye and Ear Infirmary and Boston Dispensary, Tuesdays and Fridays, 9 o'clock.

Information concerning the Summer School will be given by advertisement in this JOURNAL at a later day. Other information regarding the School will be given by the Dean, Dr. Calvin Ellis, at his office, No. 114 Boylston St., between 2 and 3, P.M.

The Dental School of Harvard University, No. 50 Allen Street, corresponds in the times and in many of the lectures to those of the Medical School. The Dental students have the privilege of attending the lectures and other exercises of the Medical Department.

The Dental School enters upon its 3d winter of instruction with greatly increased facilities.

Since the last session, the house, No. 50 Allen Street, has been purchased and fitted up especially for its use.

For the accommodation of the mechanical department an excellent laboratory has been prepared with room for from 40 to 50 students, each having his own drawer with its lock and key. Ample arrangements have also been made for the full demonstration of the manufacture of mineral teeth.

On the same floor is a Lecture-room, capable of seating from 70 to 80 students.

The operative department, as heretofore, will be located in the Out-Patient rooms of the Massachusetts General Hospital.

This School offers superior advantages, in that, while the instruction will be no less thorough in those departments peculiar to dentistry, it gives the student unusual facilities for the study of Anatomy, Physiology, Surgery and Chemistry, as the Dental student pursues the same course in them as is required of the Medical student, and in common with him has free access to the Hospitals of the city, to the Dissecting Rooms, Library and Museum of the Medical College, and also to all the courses of University Lectures. These are special courses delivered by men eminent in their departments, and embrace a wide range of medical and collateral branches.

The Degree of Doctor of Dental Medicine may be conferred upon each candidate of adult age, of good moral character, who shall have pursued his professional studies three years under competent instructors and attended two full courses of Lectures in this institution ; except that a certificate of attendance upon one course of Lectures in any respectable Dental or Medical College, or five years reputable practice, may be considered a substitute for the first course ; provided such candidate maintain a thesis, and undergo an examination to the satisfaction of the Faculty, and convince the Professors of Operative and Mechanical Dentistry of his ability to meet satisfactorily the requirements of his art.

He must also deposit with the Dean, to be placed in the Museum of the College, a specimen of mechanical dentistry or of practical or pathological anatomy, prepared during the course under the eye of the instructor.

The Fees of the Dental Department are as follows :—

Matriculating Fee, - - - -	$5·00
Full course of Lectures, including demonstrator's tickets, - -	110.00
For Graduation Fee, - - - -	30.00

Daily Order of Lectures, 1870-1.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 A.M.	Hodges.	Hitchcock.	Laboratory Chandler.	Laboratory	Laboratory Ham.	Laboratory
10 A.M.	White.	Laboratory Keep.				
11 A.M.	Bigelow.		Bigelow.	Bigelow.		Bigelow. M. G. Hosp. Operations.
12 M.				Bacon.	Operations. City Hosp.	
1 P.M.	Holmes.	Holmes.	Holmes.	Holmes.	Holmes.	
3 P.M.	Infirmary.	Infirmary.	Infirmary. Clinic.	Infirmary.	Infirmary.	Infirmary.
4½ P.M.	Moffatt.	Hawes.	Moffatt, Shepard or Hawes.	Shepard.	Salmon or Bogue.	

The Demonstrator of Anatomy will be present in the Dissecting Room every afternoon.
The Demonstrator in Charge will be present in the Laboratory every forenoon, and in the Infirmary every afternoon.

Further information will be given by the Dean, Dr. N. C. Keep, at his office, No. 74 Boylston Street.

Massachusetts General Hospital, Blossom Street. Incorporated in 1811. B. S. Shaw, M.D., Resident Physician. 175 beds. Patients suffering from medical or surgical diseases are received from any part of the United States or the Provinces. In addition to the patients treated within the Hospital, about 6000 annually receive advice as out-patients. Students are admitted to the clinical visits of the Physicians on Monday and Thursday at 8 o'clock, and on Wednesday and Saturday at 9 o'clock ; and to the surgical visits on Friday at 10 o'clock. Operations are performed in the amphitheatre before the class on Saturday at 11 o'clock. In January of each year two House Pupils are appointed in the Medical and four in the Surgical department. They are selected from the students of the medical school, and enter on their duties in May.

The City Hospital, Harrison Avenue, corner of Concord Street. (South End cars from Scollay's Building.) Incorporated in 1864. L. A. CUTLER, Superintendent. 250 beds. For the use of patients resident in Boston. Students are admitted to the clinical visits of the Physicians on Tuesday at 9 o'clock; and to the surgical visits on Friday at 10 o'clock. An ophthalmic clinic is held by Dr. Williams on Monday, Wednesday and Friday at 9 o'clock; an aural clinic by Dr. Green on the same days and hour; and a clinic on Diseases of the Skin by Dr. Damon on Tuesday at 11 o'clock. The surgical out-patient department is open to students every morning from 10 to 11. Operations are performed in the amphitheatre before the class on Friday at 11 o'clock. In February of each year, three House Physicians, three House Surgeons and an Ophthalmic Externe are appointed by competitive examination. They enter on their duties in May.

Massachusetts Charitable Eye and Ear Infirmary, Charles Street, near Cambridge. Organized in 1826. Treats patients, resident in Massachusetts, making application for Diseases of the Eye and Ear. Five thousand patients are annually cared for at this institution. Students are allowed to attend the practice of the Surgeons on Tuesday and Friday throughout the year, from 9 to 11 o'clock. Operations generally at 10 o'clock. Physicians are received during the visiting hours on any day.

U. S. Marine Hospital, Chelsea. (Chelsea Ferry-boat, foot of Hanover Street.) A. B. BANCROFT, M.D., Superintendent. Receives all patients needing treatment from the merchant marine service at this port. Especial advantages are offered for the study of all those diseases to which sailors are liable. Students visit the Hospital every day at 9½ o'clock. The Superintendent appoints resident pupils who enter on their duties in April.

Boston Dispensary, Bennett Street, corner of Ash. (South End cars from Scollay's Building.) Founded in 1796. SAMUEL A. GREEN, M.D., Superintendent. During the year ending October 1, 1870, 16994 patients were treated at the Central Office, and 8934 by the District Physicians; in all, 25928 patients. Students attend the practice of the Physicians and Surgeons at the Central Office on Tuesday and Friday at 9 o'clock. Special departments are devoted to surgical diseases and aural surgery, and to diseases of women, of men and of children. In connection with the Dispensary, Dr. Knight will give private courses in auscultation and percussion as applied to the diagnosis of diseases of the chest, beginning in November. Dr. Blake will deliver a course of lectures on aural surgery in the surgical waiting room on Tuesday at 9 o'clock, beginning Nov. 8th. Cases of midwifery are supplied from the Dispensary districts to students of the third year, on application to the instructor in obstetrics.

The Children's Hospital, 1429 Washington Street. (South End cars.) Incorporated in 1869. 35 beds. Devoted to the medical and surgical care of children between the ages of two and twelve, resident in Boston and to those non-residents who pay a reasonable board. Visits can be made on proper application to the physician or surgeon in attendance.

Boylston Medical Society.—This society was incorporated by the Legislature of Massachusetts in 1823, for the purpose of promoting emulation and inquiry among the students at the Medical School connected with Harvard University. The immediate members are students attending the winter session of the school, and are elected at stated meetings of the society. It is presided over by a Physician, selected by the members. The meetings are held in the Library of the Medical College on Friday at 7½ o'clock. The officers of the Society are J. C. Warren, M.D., President; H. B. Bridge, Secretary.

MEDICAL LIBRARIES.

There are several extensive collections of books on medical subjects in Boston, which are accessible to students. In addition to those named below, many physicians have large and important libraries, particularly rich on certain subjects.

Public Library, Boylston Street, near Tremont, 160,000 volumes, of which 6,500 are medical. The library can be consulted by any person making application. Books can be taken from the library by any inhabitant (a limited stay in the city constitutes one such), on presentation of his library card. The card is given on application at the Library.

Boston Athenæum, Beacon Street, near Park, 90,000 volumes, 4,500 of which are medical. The privileges of this private library can be enjoyed through friends who may be stockholders.

Library of the Massachusetts Medical College. A large library of standard books of reference and recent authorities is open to the student on the deposit of $5, to be returned to him when he shall cease to use the library and has returned all books loaned to him. The library room is open daily.

The Treadwell Library, at the Massachusetts General Hospital, Blossom Street, 5,000 volumes. This collection was the gift to the Hospital of the late Dr. Treadwell, of Salem. It is for the use of the officers of the Hospital, and may be consulted by others by special favor.

PRIZES.

The following prizes are offered for competition by physicians and students:

Boylston Medical Prize of one hundred and fifty dollars for a dissertation considered worthy of a prize on either of the following questions:

1. Criticisms on the recent opinion of a medical writer that the less serious Diseases of the Ear may be successfully treated by a well-qualified general practitioner, and the more serious affections by none.

2. Recent advances in the Pathology and Treatment of Cutaneous Disease.

Dissertations on these subjects must be transmitted, post-paid, accompanied by a sealed envelope containing name and address of author, to John Jeffries, M.D., Boston, *on or before the first Wednesday in April*, 1871.

The following are the questions proposed for 1872:

1. The Pathology of the Malignant and Semi-Malignant Growths.

The author of a dissertation on this subject, considered worthy of a prize, will be entitled to a premium of Two Hundred Dollars.

2. The Pathology and Treatment of Sunstroke.

The author of a dissertation on this subject, considered worthy of a prize, will be entitled to a premium of One Hundred and Fifty Dollars.

Dissertations on these subjects must be transmitted as above, on or before the first Wednesday in April, 1872.

Fiske Fund Prizes.—A Prize of One Hundred Dollars will be awarded for the best essay considered worthy on each or either of the following subjects:

Ununited Fractures; the conditions under which they occur and the most successful method of treatment.

Hydrate of Chloral; its physiological effects and therapeutical uses.

Essays must be sent to Dr. S. A. Arnold, Providence, R. I., with author's name in sealed envelope, on or before May 1, 1871.

Warren Prize.—The income of two thousand dollars for three years, will be awarded after February, 1871, to the author of the best original dissertation, considered worthy of a prize, "On some subject in Physiology, Surgery or Pathological Anatomy. The arbitrators to be the Medical Board of the Hospital."

Dissertations, accompanied with a sealed envelop, containing the name and address of the writer, must be sent on or before the 1st of February, 1871, to Dr. BENJ. S. SHAW, *Sup't Mass. Gen. Hospital, Boston.*

Boylston Medical Society Prize.—Two prizes, of thirty and twenty dollars respectively, will be awarded for the most approved dissertation considered worthy on a medical subject, to be selected by the author. Dissertations must be placed in the hands of the President of the Society on or before the 31st of January, together with a sealed envelope containing name and address of the author. Decision of the Committee to be announced at the last meeting of the Society in February.

Massachusetts Medical Society.—Admission of Members.—"No person shall hereafter become a member of the Massachusetts Medical Society, except upon examination by the Censors of said Society; and any person of good moral character, found to possess the qualifications prescribed by the rules and regulations of said Society, shall be admitted a fellow of said Society."*

The By-Laws of the Society referred to in the Special Law of the State are as follows:

"1. Any person may be admitted a member of the Massachusetts Medical Society, who shall have passed a satisfactory examination before a Board of Censors, as to his credentials, personal and medical qualifications, and character, and shall have signed the By-Laws.

"The candidate shall be a person of sound mind, and of good moral character; shall be not less than twenty-one years of age; shall have such an acquaintance with the Latin Language as is necessary for a good medical and surgical education; and shall have acquired the principles of geometry and experimental philosophy. He shall have studied three full years under the direction, and shall have attended the practice, of some respectable physician or physicians. He shall have attended two full courses of lectures on anatomy, physiology, chemistry, materia medica, midwifery, and the theory and practice of medicine and surgery.

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* Chapter 82, Massachusetts Laws, 1859.

"No person shall hereafter be admitted a member of the Society who professes to cure diseases by Spiritualism, Homœopathy or Thomsonianism.

"II. Candidates shall be examined, at any stated meeting of Censors, in each and all the branches mentioned in Article I. of the By-laws. If the examination be satisfactory to the major part of the Censors present, the candidate shall be admitted a Fellow; but, if unsatisfactory, he shall not be reëxamined by any Board of Censors in less than six months."*

The Censors of Suffolk District (who are empowered to act for the Society and to examine all those who have not a residence in some other district of the State) will meet at No. 15 Chestnut Street, Boston, on the day immediately succeeding the examination of the Medical Department of the University, and at other stated times as announced by advertisement. The Censors of the other Districts will meet at the same place and on the same day as the District Societies to which they belong.

List of Surgical Operations.

Among the operations expected this week, there will be performed at the

City Hospital, Friday, at 11 o'clock:
Extirpation of Testis.
Two operations for Cataract.
Trephining Skull for Epilepsy.
Tumor of Hand.

Massachusetts General Hospital, Saturday, at 11 o'clock:
Tumor of Parotid.
" " Humerus.
" " Neck.
" " Breast.
Hare Lip.
Necrosis of Leg.
" " Arm.
Amputation of Leg.
Plastic operation of Foot.

Dislocation of the Jaw.—M. Clement, at a recent meeting of the Lyons Medical Society, related a case of bilateral dislocation of the jaw, which had been produced by muscular action, while the patient was examining his mouth in a mirror. Although the luxation had only existed an hour, he found on trying four times that its reduction was impossible by the usual procedure. He then with the end of his finger sought for the coronoid process, pushing the upper lip forcibly upwards, and pressing the coronoid backwards. The condyle reëntered its cavity with the greatest facility, and the same procedure succeeded just as well on the other side. M. Gayet observed that in this dislocation, in which muscular action plays so great a part, we should always try to turn the patient's attention from our procedures. In fact, this is probably what occurred in the present case, the patient involuntarily contracting his muscles during the first attempts at reduction, while, on the finger being introduced into the mouth in search of the coronoid, his attention being diverted, the muscles readily yielded. He met with a similar case in which, after very painful efforts at reduction, the condyle suddenly returned to its cavity during an examination of the mouth.—*Lyon Médical*, Sept. 11.

Time of Appearance of Iritis.—Iritis occurs at every time in life. It often destroys the good result of an operation for cataract in the most advanced old age, and it is also observed in the newly-born. There are even recorded experiences which render possible the belief in an iritis occurring during fœtal life. The middle period of life, from the 21st to the 40th or 50th year, certainly furnishes the greatest percentage. This may be in part due to the greater frequency of traumatic influences and constitutional syphilis at this time of life. Sex seems to exercise no peculiar influence upon the mild or severe course of an iritis. Whether the left iris and irides of a dark color are more disposed to the affection, as some believe, is not yet sufficiently decided.—*Stellwag on the Eye.*

Chronic Bronchitis in Bright's Disease.—This is one of the most common complications of Bright's disease; so common that Rayer observed it in seven-eighths of his patients, and Wilks states it, from an extensive analysis of cases, to have been more universal than any other single symptom, albuminous urine alone excepted.

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* A Digest of the Acts of the Commonwealth relating to the Massachusetts Medical Society, together with the By-Laws, &c. Boston: 1861.

Medical Miscellany.

A Municipal Park.—Our attention has been called to the fact that on the 8th of the current month the voters of Boston are to decide whether or no they will have a Municipal Park. It is not for us to remind our citizens that this great boon can now be obtained at an expense far below that at which it can ever be reached in the future; that by furthering the plan contemplated by the present bill, a delightful pleasure ground will be secured, not only for Boston of the present, but for the widely extended city of the future; and that this and all similar public improvements add to the attractions and beauty, and so are consistent with a far seeing wisdom for the prosperity of a city. Our want of space obliges us to be very brief; but as conservators of the public health, we cannot fail to call the attention of the profession to the momentous interests for the good of the people which are involved in the present question. The vote is, shall we or shall we not have an additional breathing space for our city, which is so rapidly outgrowing its limits and increasing its population. Our medical men should not let the present opportunity slip without impressing on those with whom they are brought in contact the professional importance of the question at issue.

The Microscope Sub-stage Illumination.—A member of our Profession, who is already known as the inventor of the calliper micrometer, has introduced a new method of sub-stage illumination which it is desirable should be extensively known, not only on account of its simplicity and most remarkable efficiency, but also on account of its inexpensiveness. Dr. John Matthews does away entirely with the "condenser," and in place of it makes use of one of the achromatic objectives. It must be so mounted as to send the whole of its bundle of rays at angles varying with the requirements of any given case. He finds it best to work at angles varying from 25° to 65°. The cost of adaptation need not exceed 25s. The excellence of the invention lies in this, that the observer has thus at his command a bundle of achromatic rays, all in one azimuth, which he can throw accurately in any direction he pleases. It is not possible to complain of Dr. Matthews when he explains "definition" to be "the power of correct appreciation of light and shade in reference to form, structure, and color," or when he adds that "its completeness depends mainly upon the angle at which light is incident on or passes through an object, as well as upon the amount and quality of that light." He illustrates the principle by the fact that astronomers observe the moon in her phases instead of at the full, knowing that in the former case her surface has more of appreciable detail. His objection to the various stops and existent arrangements for what is called "oblique illumination" is, that the rays are either axial, and so throw no satisfactory shadow, or, if oblique, are mostly so in *every* azimuth, so that they must in a great degree neutralize the operation of each other. We can testify to the admirable results of Dr. Matthews's method.—*Med. Times and Gazette.*

Appointments.—At a recent meeting of the Trustees of the Massachusetts General Hospital, Dr. Edward B. Dalton was appointed a Visiting Physician.

Dr. Clarence J. Blake has been appointed one of the Surgeons to the Massachusetts Charitable Eye and Ear Infirmary.

We call attention to the proposition made by our Publishers, Messrs. David Clapp & Son, by which subscriptions to the Journal will be received either at the publication office, or by the Librarian of the Medical Library. The Journal is offered to students for the lecture season, delivered by mail or otherwise, for the sum of one dollar and twenty-five cents.

To Correspondents.—Communications accepted:—Case of Cholera Infantum.—Laws of the State regulating Admission to the Massachusetts Medical Society.—Chronic Synovitis treated by tapping the Joint and Painting the Knee with Tincture of Iodine.

Pamphlets Received.—Proceedings of the State Medical Association of Texas, held in the city of Houston, June 15, 1870, including Constitution and By-Laws. Pp. 48.—Ein Collegen-Gruss aus dem Reserve-Lazareth zu Wilbad, von Dr. Wilh. Theodor Renz, Königl. Badearzt.

Married,—In Washington, D. C., Oct. 20th, Dr. J. F. A. Adams, of Pittsfield, Mass., to Miss Annah E. N. Bailey, of Washington.

Died,—At Clarendon, Vt., Oct. 28th, Dr. Calvin Spencer, aged 70 years.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending Oct. 29, 1870.

Cities and towns.	Total.	Prevalent Diseases	
		Consumption.	Typhoid Fever.
Boston	109	17	8
Charlestown	9	4	2
Worcester	16	2	1
Lowell	18	4	3
Milford	2	0	0
Chelsea	8	2	1
Cambridge	15	3	0
Salem	17	2	0
Lawrence	17	3	3
Springfield	2	0	2
Gloucester	3	0	0
Fitchburg	3	0	0
Taunton	7	2	2
Newburyport	5	1	0
Fall River	5	1	0
Holyoke	7	0	5
	275	41	22

From all the above-named places there are reported thirteen deaths from pneumonia, ten from croup and diphtheria, ten from scarlet fever, ten from dysentery and diarrhœa, and nine from cholera infantum.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Oct. 29th, 109. Males, 59; females, 50. Accident, 1—apoplexy, 1—inflammation of bowels, 1—disease of the bowels, 1—bronchitis, 3—disease of the brain, 2—cholera infantum, 4—consumption, 17—convulsions, 5—croup, 1—cystitis, 1—debility, 3—diarrhœa, 6—dropsy, 2—dysentery, 1—exhaustion, 1—bilious fever, 1—scarlet fever, 6—typhoid fever, 8—disease of the heart, 3—infantile disease, 5—disease of the kidneys, 1—laryngitis, 1—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 7—marasmus, 6—old age, 1—paralysis, 2—puerperal disease, 1—premature birth, 4—peritonitis, 1—rheumatism, 1—scrofula, 1—tumor, 1—unknown, 4—whooping cough, 1.

Under 5 years of age, 46—between 5 and 20 years, 15—between 20 and 40 years, 23—between 40 and 60 years, 12—above 60 years, 13. Born in the United States, 78—Ireland, 21—other places, 10.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

AMPUTATION BY THE COMBINATION PLAN.

By A. T. Hudson, M.D., Stockton, Cal.

In the *American Journal of the Medical Sciences* for January, 1870, Dr. Stephen Smith, of Bellevue Hospital, has an article on "Amputation at the Knee-joint by modified Lateral Flaps." He approvingly quotes the following statement from Markoe:—

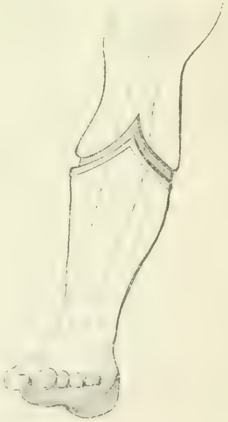
* * * "It is really of comparatively little consequence what particular method of cutting the flaps be adopted, provided only that enough integument be left amply and easily to cover the expanded extremity of the femur." With a high regard for the above names, let me ask is not the "method of cutting" one prominent question to be discussed? How shall we know when we have enough, and not too much, except by some "method of cutting"? We answer, a definite rule to secure this end, without mistake or failure, is reached by the combination plan. This plan fell to me to work out while in the United States service, a few years ago, and only now fully described; although Dr. Smith, having obtained the points from myself, has published much of it as a contribution to surgical knowledge, leaving the reader to infer it was wholly his own.

The amputations made in the First Division of the Fifteenth Army Corps, following the assault on Vicksburg, and the taking of Arkansas Post, were by the circular, by transfixion, and antero-posterior flaps, as generally made. The results thereof were often so troublesome, vexatious, and unsatisfactory, we resolved on a new method. Erichsen gave a hint to compromise between the circular and that of transfixion, wherein is combined the advantages of both, without their defects.

The first case operated on by the combination method, was a soldier in the Fourth Iowa Volunteers, in December, 1863, at the foot of Lookout Mountain, near Chattanooga, Tenn. Amputation below the knee as follows:—

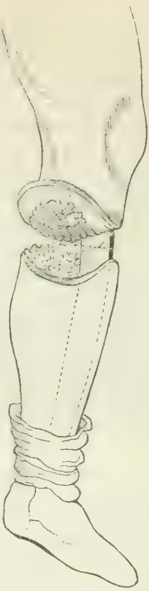
With a scalpel or cartilage knife, an incision is commenced at the posterior side of the leg, and carried in a downward semicircular sweep, to the crest of the tibia, just through the integument. The lowest deflection of the sweep is nearer the posterior leg. The same cut, beginning and terminating as before on the opposite side, completed, the skin is then retracted as in the circular operation, which lays bare the muscles for the space of an inch. (See Fig. 1). Then transfix the inner side and cut outward, as in other flap operations, dividing the muscles an inch shorter than the retracted integument. The scalpel or cartilage knife is used to divide the muscles on the fibular side. The saw is now applied at an angle of forty-five degrees, and a diagonal cut made three-fourths of an inch deep; when the direction of the saw is changed, and the bones and wedge shape

FIG. 1.



chip are severed together by a transverse cut. (See Fig. 2).

Fig. 2.



Removal of the wedge shape chip from the spine of tibia stump, also removes an old objection, viz., the danger of the sharp bone cutting through the thin integument by ulceration. The flaps thus obtained make a fine, smooth and conical stump, without any crowding or stretching, and without redundance. They are of equal size. The surgeon is not puzzled with the task of trying to fit a four-inch flap to a six or eight-inch fellow. This plan presents many advantages over every other "method of cutting the flaps."

1. The avoidance of all after-trimming.
2. Quicker and more certain union by first intention.
3. Drainage is complete, and pockets of ichor and pus avoided.
4. The stump presents no puckering or pouting corners.

The operation proved so superior and satisfactory in the above case that it was adopted by several surgeons in our division of the army thereafter, for all amputations of leg, thigh and arm.

In all cases the stump is traversed by the cicatrix. Dr. Smith, and others, object to this result on the ground that it is "not firm and resisting, and not adapted to take direct support." This is a groundless fear, and has been long a bug-bear, and innocent obstacle to the work of the surgeon; for direct pressure on the stump is never borne, and never allowed. All successful leg-makers permit no floor for the stump to touch or rest on; but support the entire weight of the body by the sides of stump, the condyles of the knee, and the tuberosity of the ischium.

In a cavalry boy, at Kenesaw Mountain, Ga., in January, 1864, whose leg was amputated by the above method in the lower third of the femur, it became necessary to re-open the stump to secure a bleeding artery, twenty-four hours after the operation. It was gratifying to witness how promptly the flaps had become glued together in initiatory union, requiring considerable force to separate them.

At the close of the war, while our division was encamped at Alexandria, near Washington, in May, 1865, Dr. Smith, while visiting the several divisions of the army, called on us; and on learning the particulars of our operation, expressed interest in it, and gratification at the result. He remarked that it was new to him, and inquired about its origin. Fergusson speaks of an operation (*Lancet*, July, 1865), as the "compromise," and thinks it appropriate for the thigh and arm. But he *transfixes* the integument and cuts the deeper parts by the circular sweep. He therefore does not describe or follow our plan, which we believe suited to nearly all amputations; and when below the knee, it is infinitely superior to all others.

COUP DE SOLEIL FOLLOWED BY PARALYSIS.

By A. W. Catlin, Brooklyn, L. I.

As the following case of sunstroke is conceived to be rather unique in its history, and interesting in its rapid response to treatment, I beg leave to ask a small space in your Journal for its communication.

On July 20th, the patient, a boy of only three years of age, was brought into the house overcome with the heat. He had been playing for some time with his companions, without any protection to his head and neck while under the direct rays of a scorching sun; and, when found, he was constantly complaining of his head, with great heat and redness of the surface; great heat in head, and symptoms of brain congestion. The patient was constantly inclined to sleep, and, when roused, acted strangely. He did not seem to recognize any one. Pulse high; constant demand for water, &c. This occurred on Wednesday, but no medical advice was called in until the following Sunday, when the mother became alarmed, having noticed, the evening previous, for the first time, the child's complete inability to raise or use its right arm.

July 24th.—The little patient was found very much in the condition described above, though not quite so drowsy as he had been. Very irritable, and afraid of all but his mother. Found the right arm completely powerless, hanging limp and useless at the side. Pupil on that side largely dilated. Lower limb not involved. Walks perfectly well. Treatment—cold to the head, previously shaved; mustard to the nape of the neck; mustard pediluviæ three times daily; potassii bromidium, three grs. every three hours. Nourishment, beef tea.

July 31st.—Child much improved as to head symptoms. Acts naturally. Eats with some appetite, and seems interested in the games of his brothers around him. Right arm as before, save a slight flexor power in fingers.

Aug. 1st.—Commenced the use of electricity to-day, using Jerome Kidder's improved apparatus, current B–D. Mother takes it at the same time, so that its strength can be better estimated. Moist sponge; positive pole was applied to the cervical region of the spine, along the line of the brachial plexus, to the arm, and fingers which the mother held, she having negative pole in her right hand.

Aug. 6th.—Muscular power increasing; able to flex forearm on arm.

Aug. 8th.—Improvement still going on. Complication of worms called for special treatment, and ol. chenopodii resulted in the child passing a dozen or more, of the species *ascaris lumbricoides.*

Aug. 30th.—The applications have been continued through the past two weeks every second or third day. The record states that the child is now able to raise the whole arm from the shoulder, and, with the exception of a slight hesitancy and slowness of movement, it is entirely restored.

Sept. 8th.—Quite well, but pupil on that side still slightly dilated.

This case is interesting and instructive, reminding us of the fact that children, even of tender years, are liable to sunstroke, and should be guarded therefrom; that the brain congestion which follows may be so intense as to result in effusion and hence paralysis. (Austin Flint, however, states that paralysis is neither a concomitant nor a sequel to insolation.) To what, then, are we to ascribe the loss of muscular power in this case? The child had received no fall or injury; that point was carefully inquired into, and, previous to this exposure to the sun, was perfectly well.

Attention is also called to the prompt and complete recovery which followed the use of electricity. We have used this agent before (not in similar cases), with but partial success.

DEFECTS OF OCULAR REFRACTION, &c.

(Continued from page 266.)

Lecture II. Part II.—*Relative Accommodation. Action of Glasses when used to assist Vision.*

There is a relation between the accommodation and the convergence. Suppose, as normally is the case, that, when the *visual lines* are parallel, being directed to a distant object, each eye is then accommodated for parallel rays. If the visual lines subsequently converge to a point at a less distance a, each eye must then be accommodated for the new distance and must accordingly add to itself an amount of refractive power, 1 divided by a, over and above what it had when the visual lines were parallel. Thus a certain action of the accommodation becomes *associated* with a certain convergence.

Donders has experimentally shown that for a given convergence the adjustment admits of a certain range, called the relative range, that is, the range relative to the particular convergence; the relative near-point being nearer, and the relative far-point being farther than the point of intersection of the two lines of vision, at which we suppose the object. It also appears from Donders's diagrams that for different convergences there are respectively different far-points; as if the eye has a different refraction for different convergences. This last circumstance may be explained by supposing that the effort to converge carries with it a corresponding effort to accommodate, and that the latter cannot be relaxed entirely so long as the former continues. According to Helmholtz, the cornea does not change its curvature in accommodation for near objects, and Knapp's observations tend to show that the lens admits of sufficient change to account for accommodation. Otherwise we might have hoped to explain the approach of the far-point for an increased convergence by supposing an elongation of the eye caused by pressure from without accompanying the convergence.

With regard to the measure of the relative accommodation, the amount by which the eye can accommodate nearer than the object for the particular convergence is called the positive part; and the amount by which the accommodation can be relaxed beyond the object is called the negative part.

Donders distinguishes three meanings of the expression, range of accommodation:

the *absolute*, the range from the absolute farthest point to the absolute nearest point for each eye separately; then the *binocular range*, that from the farthest point for both eyes at once to the nearest point for both eyes at once; and, finally, the *relative*, the range for a particular convergence, and which varies with different convergences.

The methods of determining the far-point will be given subsequently. The near-point of binocular vision may be determined by finding *how near* fine print can be easily read. If the eyes are so presbyopic that ordinary print cannot be read at all without glasses, we may let them look through convex glasses, of $\frac{1}{12}$ or $\frac{1}{24}$ or others, and find the binocular near-point of the eyes *when looking through these glasses*; we can calculate the distance for which the eyes themselves are then accommodated, and take this distance as that of the binocular near-point without glasses, but only by way of approximating, because the latter corresponds to a convergence less than that under which the former was observed.

We come now to some general considerations upon the action of glasses when used to assist vision.

In the first place, it is evident that if there is a considerable range of accommodation, the eye can see distinctly an object at a given distance *through different* glasses according as more or less of the disposable accommodation is used; the less accommodation is used, the stronger glass is needed.

We have seen that the refractive power of a given eye may be divided into two parts: a relatively constant part, *the refraction*; and a variable, the *accommodation*. Now a glass, being constant, may be considered when placed before the eye as added to the constant part of the refractive power of the eye; and as on this latter depends the far-point, we may say that *the glass alters the far-point;* that is, we have a new system, the eye combined with the glass; the far-point of this system is different from that of the eye alone.

The far-point being changed, of course the accommodation required to see distinctly a point at a given distance would be different. This last also appears directly without reference to the far-point; for glasses alter the directions of the rays proceeding from an object; they cause them to meet the cornea with different directions from those which the rays would have, if the glass were not present. A different amount of accommodation is then required to see distinctly the given object.

Although manifestly glasses do not directly increase or diminish the faculty of change in the crystalline lens, from which accommodation results, yet as this change now takes place in a different system, the eye combined with the glass, its effect as measured by Donders's formula becomes somewhat different, if we take into account, as we must, the distance between the glass and the anterior nodal point of the eye.

As the *amount of disposable accommodation* depends in part on the mutual convergence of the two axes, it will be *indirectly affected by glasses*, if these latter should occasion an alteration of the convergence; as is the case with prismatic glasses; also with concave glasses, which, by allowing the object to be seen at a greater distance, give rise to a less convergence of the optic axes.

Also, as glasses change the amount of accommodation required to see distinctly the given object, and as the diminished exercise of accommodation tends to bring about a diminution of convergence, therefore *glasses may alter the convergence.* This bears on the use of convex glasses after operation for strabismus.

Again: Spherical glasses change the size of the retinal images, convex increasing it and concave diminishing it, and in consequence influence our judgment as to the size, distance and form of the objects.

The range of distinct vision must depend on the variable part of the refractive power, that is, on the accommodation. If this is very limited, then the range of distinct vision (in so far as this latter depends on distinct retinal focusing), must also be small, and if a given glass in such case suited the eye for near objects, the same glass would not suit it for the distance. This is especially the case with eyes after the operation for cataract in which, owing to the loss of the instrument of accommodation, the crystalline lens, the accommodation is reduced to zero, and, as is well known, a glass of about 2½ inches focus is generally required for reading, and one of about 3½ inches focus for distant objects. The first of these exceeds the last by a glass of 8¾ inches focal distance, just the additional refractive power required for seeing at 8¾ inches.

Again, in presbyopia (which consists in a diminution of effective accommodation, whereby the near-point is pushed off, coming on with advancing years), if the eye is emmetropic, no glass is required for distance and a convex for near objects.

Again, a myopic eye may become presbyopic, and a convex lens may be required for reading while a concave is necessary for distance.

In looking in a general way at the selection of glasses there are particularly two elements to be considered: the maintaining of the required refractive power of the eyes and of the required convergence. These two elements are mutually dependent, or associated. If the convergence is increased, the refractive power tends to become greater also; and if we accommodate more, the eyes tend to turn in.

The age of the patient must also be taken into account; for with advancing years the accommodation diminishes, and late in life the far-point also recedes a little.

The more obvious general theory according to which to conceive the selection of glasses is as follows: assume that the required convergence together with a certain degree of accommodation can be easily maintained. If this amount of accommodation is not adapted to see distinctly an object at the intersection of the visual axes for the particular convergence, then use the proper glass.

If the required convergence cannot be maintained, the deficiency might be supplied either by prisms or by tenotomy, and then the glass selected as above.

Supposing a convex glass needed for a given distance, say 12 inches, as would be the case if patient saw with difficulty at that distance, but better at a greater distance, what glass would be needed? It is evident the artificial help required would be less according as the eye itself maintained more accommodation. It cannot be said beforehand how much accommodation the eye itself can maintain easily and consistently with the required convergence. If we suppose two-thirds of the binocular accommodation can be used, then we could take as first trial the following glass: for 12 inches distance, supposing the eye emmetropic, the difference between glass $\frac{1}{12}$ and $\frac{2}{3}$ of the binocular accommodation. Glass $\frac{1}{12}$ would, in the case of emmetropia, do all the work; this glass, however, would be too strong, as the eye will by its accommodation naturally do a part.

If the glass thus selected should suit best for a distance greater than 12 inches and not satisfactorily for 12 inches, we must try a stronger one.

This view leaves much to direct trial, and yet it is quite consistent with a remark of Donders, who writes in the chapter on Presbyopia, pp. 219-220, "Easy as it is to decide whether a necessity exists for the employment of convex glasses, so difficult is it to establish rules for ascertaining the degree of convexity required."

Another plan, according to which the selection of glasses might be conceived, is as follows. Suppose the eyes can see well at a certain distance somewhere between the binocular near-point and far-point, say at distance 18 inches. Then if it is desired to read at the less distance 12 inches the required glass must give to rays from point at distance 12 inches directions as if they came from a point at distance 18 inches, and prisms of not quite 4° with bases inward must be worn to make the two virtual images coincide in the median plane at the distance 18 inches (the real object being meanwhile at distance 12 inches). Each eye is then directed to, and accommodated for the distance of, the corresponding virtual image, which takes the place of an object; as the two virtual images coincide, the two eyes are then accommodated for the point at the intersection of the two visual lines, as in ordinary binocular vision without glasses; it is supposed that the eyes can easily maintain the requisite accommodation and convergence.

In the usual method of using convex glasses, without prisms, both eyes are directed to the real object, but accommodated for a point farther off, so that the two virtual images, corresponding to the rays as refracted by the lenses, do not coincide. Nevertheless, the object is not seen double, unless the glasses are so strong that the eyes, in relaxing their accommodation to the required degree, are obliged to diminish their convergence also, and thus, no longer being both directed to the object, double vision ensues.

If we suppose the required lens so broad that the two eyes can look at once each through an eccentric part of it at the object, these parts will have, as regards lateral displacement of the virtual images, nearly the prismatic effect above referred to. Instead of the combination of lens and prism, such eccentric portions of a broad lens have been proposed.

Although the argument for these so-called orthoscopic lenses looks plausible, it must be remembered that they have the defects as regards refraction of the lateral portion of a spherical lens. Zehender objects to them that they give incorrect images. The method may perhaps be adopted in certain cases, but probably only to a limited extent, as on the one hand only weak prisms can be used, and the orthoscopic prism, even for glass of 17 inches focus, is one of 8 degrees; and on the other hand, the objection to the usual method, the supposed want of harmony between the accommodation and the convergence, is valid only to a certain degree.

If we suppose the glasses to be used according to the first of these methods, the usual one, then the centres of the glasses should be each on a straight line between the object and the centre of the eye, and the glass should be nearly perpendicular to this line. The distance of the centres of the eyes from each other being about 2½ inches, if each glass were one inch in front of the centre of the eye, and the object 15 inches off, then the distance apart of the centres of the glasses should be to 2½ inches as 14 is to 15, that is 2⅓ inches. The inclination of the glasses to each other would be about 9 degrees. According as the bridge of the nose were more or less prominent, a differently shaped frame is required to place the centres of the glasses so as to be opposite the pupils.

Corrigend.—Page 264, first column, instead of "(Continued from page 166)" read (*Continued from page* 249).

Second column, line 13, instead of the word "used," read *worn as spectacles.*

LAWS OF THE STATE REGULATING ADMISSION TO THE MASSACHUSETTS MEDICAL SOCIETY.

At a meeting of the Councillors of the Massachusetts Medical Society, held in Boston, October 5th, 1870, the Committee, to whom was referred the Report of the Delegates to the American Medical Association, and other papers, made a Report; and that portion of their Report which related to the Laws of the State regulating the admission of members into the Society was referred to the Standing Committee on Publications, with instructions to publish as much thereof as appeared to them of general interest. The following extracts are therefore sent to the Boston Medical and Surgical Journal for publication :—

In the year 1781, the Legislature of the Commonwealth of Massachusetts passed an Act that certain persons therein named "be, and they hereby are formed into, constituted and made a body politic and corporate by the name of the Massachusetts Medical Society; and that they and their successors, and other persons as shall be elected in the manner therein mentioned, shall be and continue a body politic and corporate by the same name forever." (Special Laws of 1781, chapter 15.)

In this Act certain privileges are granted to the Fellows of said Society, and certain duties enjoined upon them, the neglect of which was punishable by severe penalties.

It was enacted (sect. 5th) "that the Fellows of said Society may, from time to time, elect such persons to be Fellows thereof as they shall judge proper; and that they, the Fellows of said Society, shall have power to suspend expel, or disfranchise any Fellows of said Society."

It was also enacted (sect. 6th) "that the number of said Society who are inhabitants of this Commonwealth shall not at any one time be more than seventy (70), nor less than ten (10). And then, as if to imbue the Society with a congenital hatred of quackery, there occurs in italics this remarkable preamble to the seventh section of said Act. "Whereas it is clearly of importance that a just discrimination should be made between such as are duly educated and properly qualified for the duties of their profession, and those who may ignorantly and wickedly administer medicine, whereby the health and lives of many valuable individuals may be endangered, or, perhaps, lost to the community;—Be it, therefore, enacted (sect. 7th) that the President and Fellows of said Society, or such other of their Officers or Fellows as they shall appoint, shall have full power and authority to examine all candidates for the practice of Physic and Surgery (who shall offer themselves for examination) respecting their skill in their profession; and if, upon such examination, the said candidates shall be found skilled in their profession, and fitted for practice of it, they shall receive the approbation of the Society, in letters testimonial of such examination, under the seal of the said Society, signed by the President, or such other person or persons as shall be appointed for that purpose." It was also enacted (sect. 8) "that if the President, or such other person or persons, so elected or appointed for the purpose of examining candidates as aforesaid, shall obstinately refuse to examine any candidate so offering himself for examination as aforesaid, each and every such person so elected and appointed as aforesaid, shall be subject to a fine of one hundred pounds to be recovered by the said candidate."

In an Act passed Feb. 10, 1789 (Special Acts of 1788, chap. 49), it was enacted "that it shall be the duty of the said Massachusetts Medical Society, in order more effectually to answer the designs of their institution, from time to time to describe and point out such a medical instruction, or education, as they shall judge requisite for candidates for the practice of Physic and Surgery, previous to their examination before them, or their officers appointed for said purpose, respecting their skill in their profession, and shall cause the same to be published in three newspapers in three different counties within this Commonwealth."

In an Act passed March 8, 1803 (Special Acts of 1802-3, chap. 123), two special elections were provided for; one for the election, before the next annual meeting, of "such and so many suitable persons, being physicians or surgeons resident within this commonwealth, as they shall see fit," into that corporation and to be Fellows thereof; and another at the annual meeting, of "so many Councillors as the said Society shall, from time to time, judge necessary and expedient;" and, also, that at their first meeting afterwards the Councillors shall appoint "five Examiners, or Censors, for examination of all the persons," &c. This is the first enactment directing the appointment of Censors; their election has since been given to the District Societies, but their powers and liabilities have remained essentially the same. It was also enacted (sect. 3, Acts of 1802-3) "that the said Councillors, at any of the three stated meetings of the same, and only at these meetings, and after three months nomination of every candidate, and not otherwise, by a major vote of those present, may elect any suitable person or persons to be a Fellow or Fellows of said Society; and all persons, if not practising physicians or surgeons, or not resident within this Commonwealth, who shall be so elected, may be deemed honorary members." It was further enacted (sect. 4, Acts of 1802), "that every candidate who, upon examination, shall be approved by a majority of said Examiners or Censors, shall be entitled to letters testimonial of their approbation and of their license to such candidate to become a practitioner of medicine or surgery under the hands of the Examiners consenting thereto; and to such letters testimonial the seal of the said Corporation shall be affixed by the president or secretary, if any there shall be, with the signature of the same." "And every person who shall receive the said letters testimonial, and such also as hereafter may be admitted to the degree of Bachelor (Doctor, subsequently substituted for Bachelor, by the University) of Medicine at Harvard University, shall be entitled to the use of the libraries of the Society, under such restrictions as the Councillors may direct, and after three years of approved practice in medicine and surgery, and being of good moral character, and not otherwise, shall, upon application, and subscribing to the By-Laws, as aforesaid, be admitted a member of said Corporation, while a resident practitioner of medicine or surgery within this Commonwealth."

In 1817, and in 1818, general laws were passed compelling the Fellows of the Massachusetts Medical Society to examine candidates for license to practise Physic and Surgery, and outlawing all accounts for the practice of Physic and Surgery made by those who were not graduates of some Medical school or College, or licentiates of the Massachusetts Medical Society.

In March, 1831 (Acts of 1830, chap. 146) the Legislature so amended the Act of March 8, 1803, as to compel the Society to receive as members, upon application, all graduates of Harvard University, and its own licentiates, being of good moral character, and not otherwise, without three years approved practice.

In 1836, years before the existence of the American Medical Association, the Revised Statutes (Rev. Stat. chap. 22) specially repealed the general Acts of 1817 and 1818, and enacted provisions in relation to the examining of candidates, requiring all to be examined who, residing within the State, offered themselves to be approved as practising physicians and surgeons; and raised the fine, for unreasonably refusing to examine the same, to four hundred dollars.

In 1859, March 5th, the Legislature passed the following Act (Acts of 1859, chap. 82):—

"Sect. 1st. No person shall hereafter become a member of the Massachusetts Medical Society except upon examination by the Censors of said Society, and any person of good moral character found to possess the qualifications prescribed by the rules and regulations of said Society shall be admitted a Fellow of said Society."

"Sect. 2d. This Act shall take effect from and after its passage."

The General Statutes came in force May 31, 1860, and repealed the Revised Statutes (see General Statutes, chap. 182), but did not repeal any of the Special Acts passed in relation to the Massachusetts Medical Society or in addition to its Act of Incorporation. This Statute of 1859 is the last addition to the special laws in relation to the Massachusetts Medical Society, and repeals by implication all previous Laws which may conflict with it. All admissions to membership in the Society must be made in conformity to this Law. It is a Law of the State, and the Society must comply with its requisitions, until it is altered or repealed by the Legislature of the State.

In a word, then, the whole matter of admission is with the Censors, who must at all times conform to the Laws of the State, from which the Board derives its existence and its authority.

In accordance with the Law of the State of 1859, and votes of the Society passed previously, Dr. Alley (then Secretary of the Society), by direction of the "Government of the Massachusetts Medical Society," issued a circular, dated April 8th, 1861, to the Censors, reminding them that "all candidates *must* be examined by a Board of Censors."

The only method of expulsion of a member provided in the By-Laws of the Society is through the agency of a Board of Trial, which, under penalty for neglect or refusal, must hear and decide upon every case properly brought before it. No instance has been found of neglect of the Board to do its duty.

At the meeting of the Councillors, Oct. 5th, on motion of Prof. H. J. Bigelow, of Harvard University, seconded by Prof. C. Ellis, Dean of the Faculty, it was voted, *nem. con.*, to strike out a paragraph, relating to the admission of Medical Graduates of Harvard University, from Art. I. of the By-Laws of the Society—it having been originally founded on the old State Law, which was modified by the Revised Statutes in 1836, and repealed by an Act of 1859, and *therefore invalid and obsolescent* from that time, though left inadvertently upon the books.

Reports of Medical Societies.

VERMONT MEDICAL SOCIETY. REPORTED BY THE SECRETARY, L. C. BUTLER, M.D.

The fifty-seventh annual session of this Society was held at Montpelier, Oct. 19th and 20th, 1870. Dr. Henry Janes, of Waterbury, President, in the chair; Dr. L. C. Butler, of Essex, Secretary. The proceedings of the semi-annual session at Burlington having been read by the Secretary, the Society proceeded to the transaction of business.

Dr. S. Putnam, of Montpelier, presented the report of the Delegates to the Medical Department U.V.M. at Burlington, which was accepted.

Dr. C. P. Frost, of Brattleboro', moved to strike out the last paragraph of standing resolution No. 2, of the Society, relating to forfeiture of membership in the Society, which was unanimously adopted. Under this arrangement the names of Drs. G. M. Hall, of Swanton, M. C. Edmunds, of Weston, E. V. Watkins, of Newbury, H. H. Niles, of Thetford, and H. Fales, of Waterbury, were presented for membership, and were duly elected.

The credentials of Dr. Arthur S. Wolff, delegate from the Medical Society of New York, were presented, and he was cordially received by the President, and invited to participate in the deliberations of the Society. Dr. Wolff responded, expressing the congratulations of the Society he represented.

Chloral Hydrat.—Dr. J. N. Stiles, of Windsor, presented a paper on Chloral Hydrat, giving some practical results of its use in his practice, and under his observation and that of others.

An interesting discussion followed, in which Drs. Wolff, Stiles, Frost, Watkins, Janes, Putnam, Richardson, and others, participated, giving results of their experience in its administration in various diseases.

Dr. Wolf was not favorably impressed with its use in his practice. Dr. Watkins had used it in *delirium tremens* with controlling effect. Dr. Janes had noticed prolonged soporific effect from its administration in the ordinary dose, in one instance requiring three days to recover from it. Dr. Putnam had administered it in *puerperal convulsions* with some success, but had seen no hyperæsthesia resulting from it. Dr. Frost thought the profession would find in this remedy a very good hypnotic, which may take the place of opium and other drugs of that nature. Dr. Richardson inquired in relation to its use in *hysteria.* Drs. Watkins and Janes had used it in that disease with good effect. Dr. Richardson thought the condition of the system had much to do with its effect, correcting irregularities, sometimes changing and increasing its operation. He had used it in *hysteria* and in general nervous derangements, and in doses of ten grains each. The general opinion of those who had prescribed the remedy was that ten to fifteen grain doses were sufficient, though much larger and much smaller had been prescribed, as in one instance a hundred grains and in another one grain.

In the afternoon a resolution was introduced by Dr. L. C. Butler, inviting county Medical Societies to a more intimate relation with the State Society, by making their organizations auxiliary to it; sending valuable papers presented at their meetings, to the State Society to be published in its transactions, and by contributing of their funds to sustain the State Society. Adopted.

The names of Drs. H. J. Miller, of Sheldon, and George C. Briggs, of Franklin, were presented for membership, and they were duly elected.

Dr. C. P. Frost presented an elaborate paper on Insanity, considering it in its pathological, diagnostic and therapeutical aspects.

Dr. S. Putnam, of Montpelier, also read a paper on the same subject, considering it in its statistical aspects, showing its rapid increase in the present day, and in its legal aspects showing the tendency to make the plea of insanity an excuse and palliation for crime. At 4, P.M., the President's address was delivered, and was upon the subject of *Imaginary Diseases and Imaginary Remedies*, which he illustrated by numerous cases occurring in his own practice and under the observation of others.

During the evening session Vice President Abram Harding, of Grand Isle, occupied the chair.

Dr. C. P. Frost, from the Board of Councillors, recommended the following persons to become members of the Society: Drs. D. E. Wells and Charles Gaylord, of Hardwick, Chas. Cole, of West Haven, H. S. Calderwood, of Moretown, and George Spafford, of Windham, and they were duly elected.

Dr. Frost also announced the decease of Drs. C. M. Rublee, Daniel Bates, and M. J. Love, and the appointment of Drs. J. E. Macomber and B. F. Morgan to prepare obituary notices of Drs. Rublee and Love.

The Board of Councillors also nominated the following persons for election as honorary members of the Society: Drs. A. S. Wolff, of New York, Albert Smith, of New Hampshire, and J. H. Baxter, of Washington, D. C.

Dr. Frost presented the name of Dr. B. F. Morgan, of Bennington, for Commissioner of the Insane, and he was unanimously recommended by the Society to the Legislature for election to that office.

Typhoid Fever.—The greater portion of the evening was passed in listening to reports in relation to epidemics and other diseases, from all parts of the State. The prevalence of a mild form of *typhoid* fever in nearly every county of the State during the past year was specially noted, sometimes complicated with pneumonia, and occasionally with jaundice. Dr. Hyde, of Caledonia Co., spoke of the prevalence of *scarlatina* in that county, and of the use of carbolic acid in its treatment, as a bath and gargle, and internally in a formula of ten drops of the solution to the ounce of water. Dr. Frost, of Windham county, thought there had been less of ordinary diseases than usual in that county. He raised the inquiry in regard to the true pathology and origin of typhoid fever. Dr. Carpenter, of Chittenden Co., had noticed a difference in the type of disease, between the lake and inland towns. He had not seen a case of typhoid fever in Burlington for thirteen years, but had seen cases in other towns. The type in the city was the congestive. During this season intermittent fever had prevailed as the result of malaria north of the city. We know very little about the cause of fever, or of its pathology.

Dr. G. M. Hall, of Franklin Co., considered typhoid fever as a specific disease, a species of exanthema, self-limited in its duration, and requiring little treatment. In reply to an inquiry, he said, typhoid patients do not have the disease a second time. There may be exceptions to this rule as in all exanthemata, but they are few. In this opinion, Dr. Stiles and Dr. Morgan concurred, while Dr. Emmons, of Hartland, and Dr. Hyde, of Hardwick, had seen several exceptions to the rule, but not cases of marked severity.

During the forenoon of the second day, Dr. S. N. Stiles proposed an amendment to the By-Laws of the Society, relating to the appointment of delegates to Medical Societies and Associations, which was adopted. The names of Drs. Edward S. Peck, of Burlington, R. C. Ward and Wm. H. Platt, of Shoreham, and Harvey Knight, of Georgia, were proposed for membership, and they were duly elected.

Dr. B. F. Morgan read an obituary notice of Dr. M. J. Love, of Bennington.

Dr. Chandler presented the written details of a case of *Intussusception*, in which 36 inches of the intestines were discharged. This case was one of peculiar interest, because it was published in the secular papers of the day as an instance in which a *snake* had passed through a human being. Dr. Chandler had the satisfaction of seeing the *varmint*, and describes it as "of a darkish color, lighter on the *belly* (as they called it), not so flat as one might imagine a tube to be when its walls lay in contact, and looking not entirely unlike what it had been named." The post mortem revealed the cicatricial point in the intestines from whence the *snake* was taken.

Dr. N. W. Braley presented a resolution appointing a committee of five to confer with the Legislature now in session relative to an appropriation for publishing the transactions of the State Medical Society. The committee was constituted as follows: Drs. Carpenter, Scott, Bartlett, Braley and Butler.

The committee on nomination of officers of the Society for the year ensuing reported as follows, and they were elected:—

President, Dr. S. Putnam, of Montpelier; *Vice President,* Dr. A. J. Hyde, of Hardwick; *Secretary,* Dr. L. C. Butler, of Essex; *Assistant Secretary,* Dr. E. H. Pettingill, of Saxton's River; *Treasurer,* Dr. D. G. Kemp, of Montpelier; *Auditor,* Dr. J. N. Stiles, of Windsor; *Committee on Publication,* Drs. L. C. Butler, G. B. Bullard, and O. F. Fassett; *Delegates to U. V. M. Med. Dep't,* Drs. L. C. Butler and N. W. Braley; *to Medical Society of New York,* Drs. C. L. Allen and A. S. Woodward; *to Medical Society of Massachusetts,* Drs. J. N. Stiles and J. S. Richmond; *to Medical Society of Connecticut,* Drs. L. C. Butler and C. P. Frost; *to Medical Society of New Hampshire,* Drs. C. A. Scott and D. E. Wells; *to Medical Society of Maine,* Drs. G. B. Bullard and Chas. Gaylord; *to Medical Society of New Jersey,* Drs. E. F. Upham and H. O. Bartlett; *to Medical Society of Connecticut River Valley,* Drs. M. C. Edmunds and C. A. Sperry; *to American Medical Association,* Drs. A. S. Woodward, Chas. Cole, H. D. Holton, S. W. Thayer, H. Janes, W. R. Hutchinson, N. W. Braley; *Committee on Registration,* Drs. L. C. Butler, O. F. Fassett; *Committee on Epidemics and other Diseases,* one for each County in the State, Geo. C. Briggs, G. B. Bullard, J. E. Cranston, C. M. Chandler, D. T. Blanchard, E. F. Upham, J. N. Stiles, H. D. Holton, B. F. Morgan, C. L. Allen, M. H. Eddy, J. B. Morgan, S. R. Corey, A. Harding.

Dr. S. Putnam presented cases of *Uterine Disease* in his practice, with treatment.

Dr. Miles proposed an amendment to the Constitution of the Society, fixing the time of holding the annual meeting on the second Wednesday of October in each year, which was adopted.

The semi-annual meeting of the Society is to be held at St. Albans, on the first Wednesday and Thursday of June, 1871.

Medical and Surgical Journal.

BOSTON: THURSDAY, NOVEMBER 10, 1870.

PHOTO-MICROGRAPHY.

To no one more than to Dr. Woodward is the medical world indebted for the cultivation of this new and important art. His position at Washington as the Curator of the Medical, Microscopical and Comparative Anatomy Sections of the Army Medical Museum has put him in possession of unlimited material for the most valuable investigations, material which he has utilized in a most praiseworthy manner. As is well known, the labors of Dr. Woodward have received the highest encomia from scientific men at home and abroad, and his memoirs have been copied liberally into the journal articles and the works of European authors.

Dr. Woodward has once more laid the profession under an obligation by presenting them a monograph on Certain Points connected with the Histology of Minute Bloodvessels, a report made to the Surgeon General U.S.A., and issued from his office. The work is accompanied by a series of eleven very valuable and interesting photomicrographs. The monograph is well worthy a careful perusal; we have only space, however, to quote portions of it.

"Having recently been occupied in the critical examination of certain preparations, in the Microscopical Section of the Museum, illustrative of the minute anatomy of the bloodvessels, I have thought that some of them threw so much light on certain points involved in the recent discussions with regard to the doctrine of inflammation, that a short account of them would be of interest, and might perhaps do good service, in connection with the appreciation of the conflicting statements which have appeared in the medical journals since the publication of the paper of Dr. J. Cohnheim on inflammation and suppuration.

"Perhaps the observations of Cohnheim must fairly be regarded as elaborations of the previous experiments of Dr. Augustus

Waller, but certainly they produced an impression upon the medical world far beyond that made by the papers in the *Philosophical Magazine*, and more or less complete accounts of the conclusions arrived at by the distinguished Berlin observer have continued to appear, from time to time, in both foreign and American medical journals, ever since the publication of his paper in 1867.

"Recently protests against these conclusions have appeared in various quarters, among which particular reference may be made to the paper of Prof. Koloman Balogh, of Pesth, published in 1869, and that of Dr. V. Feltz, of Strasbourg, in 1870. Both of these authors have failed to see the white blood corpuscles pass through the coats of the small vessels in the manner described by Cohnheim, and deny the existence of stomata between the cells of the vascular epithelium, large enough to permit such a wandering to occur."

Desiring to investigate the subject thoroughly, Dr. Woodward made careful expements, which led him to believe that Cohnheim was a most conscientious observer, who had described as faithfully as possible the impressions made upon him. The results he obtained, he found, could be described in the very language of Cohnheim, without drawing upon the imagination.

"Most of the preparations here referred to are examples of the results attainable by staining the tissues with a dilute solution of the nitrate of silver. This reagent has been employed for various histological purposes during the last ten years, and has attracted attention especially in connection with the cornea, the various forms of connective tissue, the ultimate branches of the lymphatics and the boundaries of the cells which constitute epithelial surfaces."

"If a dilute solution of nitrate of silver is brushed over a clean epithelial surface taken from a recently killed animal, and the tissue after washing with distilled water is exposed for a short time to the action of sunlight, it will be found on microscopical examination that a brownish black precipitate of silver has been produced at the boundaries of the epithelial cells, while the cells themselves are comparatively but little stained, or if the manipulation has been carefully conducted, are not stained at all. For this purpose I have most frequently employed, at the Museum, a solution made by dissolving one part of crystallized nitrate of silver in four hundred parts of distilled water, but considerable variation on either side of this strength does not much modify the result, provided the solution is well washed off before the tissue is exposed to the light.

"If the same solution is injected into the bloodvessels, the lining epithelium is handsomely mapped out in all those membranous and superficial parts in which a ready exposure to the action of light is practicable, and although in the parenchymatous organs, such as the liver, the spleen, the kidneys, &c., the juices of the tissues are apt to interfere with the reaction, yet even here occasional success may be attained. In practice it is often found advantageous to combine the silver solution, intended for injection, with a certain amount of gelatine, by which the bloodvessels are kept handsomely distended and the beauty of the preparation is much increased."

In addition to the nitrate of silver process, many of the specimens are tinged with carmine, as described by Thiersch in his work on epithelial cancer.

Dr. Woodward's own description of some of the photo-micrographs must serve as a sample of the whole series.

"I. Photograph representing several venous radicles uniting to form a small vein, in the muscular coat of the urinary bladder of the frog. From preparation No. 3378, Microscopical Section. Magnified 400 diameters by Wales's one eighth objective, illuminated by the Magnesium lamp.

"The principal venous trunk represented in this photograph is 1-400th of an inch in diameter. It is formed by the union of three smaller radicles, of which that on the left hand is much out of focus. Another smaller radicle, also much out of focus, joins the trunk on the left, near the bottom of the picture. The walls of the venous trunk, and of those of its branches which are in focus, are plainly seen to be formed of somewhat irregular epithelial cells, which vary in shape and size, averaging 1-500th of an inch in length and 1-2200th in breadth. The boundary of each cell is indicated by a zigzag black line. In each of the cells which is accurately in focus, a smooth, oval nucleus, 1-2800th of an inch in length, is visible. In examining the original preparation, by changes in the fine adjustment of the microscope, similar nuclei can be seen in each of the epithelial cells. These nuclei, being brilliantly stained with carmine, contrast sharply with the black cell-boundaries resulting from the silver imbibition. By a still further alteration of the fine adjustment, the cells and nuclei of the opposite side of the vein are brought into view."

"III. Photograph representing the stomata between the epithelial cells of a vein 1-50th of an inch in diameter in the mesentery of the frog. From preparation No. 3276, Microscopical Section. Magnified 400 diameters by Wales's one-eighth objective.

"Owing to the curved form of the vein, but a small portion of its surface is in focus. In this portion the silver-stained boundaries of several of the epithelial cells of the vein are visible, and display in their course certain remarkable forms, which may be compared to the Wormian bones of the cranial sutures. These are the so-called stomata. They are irregularly rounded in form, and vary from the 1-10000th to the 1-4000 of an inch in long diameter. These shown in the photograph present a clear central space, bounded by a sharp, black outline, which is sometimes even thicker than the boundaries of the cells themselves. The nuclei of the epithelial cells are not shown. * * * * *

"Having arrived at this conclusion with regard to the general interpretation of the action of silver on epithelial surfaces, the true meaning of the so-called stomata next demands consideration. They are to be observed most abundantly, as may be inferred from the photographs described, in veins of moderate size. I have found them largest and most numerous in veins 1-50th of an inch in diameter, or even larger, and they become smaller and rarer in smaller branches. They are comparatively infrequent in the capillaries and still more so in the small arteries; the Museum however possesses preparations showing them in both. I have moreover concluded from my own observations that in number and size they vary in vessels of the same dimensions in different parts of the body. Thus, for example, in the veins of the mesentery of the frog they are larger and more abundant than in veins of the like dimensions in the urinary bladder of the same animal.

"In figure they are rounded, oval, or oblong. I have measured them as large as 1-4000th of an inch in diameter, but smaller ones 1-5000th to 1-6000th of an inch are more common, and the smallest and most frequent do not exceed 1-10000th of an inch. Sometimes they present clear centres sharply mapped out by black boundaries, sometimes forms of the same size and character are opaque and black throughout, and this has been interpreted as due to variations in the composition of the fluid by which the opening is occupied, which sometimes precipitates the silver solution, while at other times it does not, and the action is limited to the solid margins of the pore. They are almost invariably found in the marginal line between adjacent epithelial cells, and the rare cases in which I have observed them apparently in the cells themselves, are probably to be explained by the adjacent margins having from some cause escaped the influence of the silver salt. From my study of these peculiar inter-cellular forms, I am inclined to regard with favor the opinion that they are actual openings in the epithelial layer."

"It has been urged, however, by Balogh, that even if the stomata described in the vascular epithelium are admitted as such they are not large enough to permit the passage of the white blood corpuscles which, as is well known, average about 1-3000th of an inch in diameter. But even if we discard the supposition that the pores may be stretched open and made larger by the distended condition of the vessels of inflamed parts, there appears to me no difficulty in understanding how a white corpuscle might pass through the smallest of the stomata I have described. An opening 1-10000th of an inch in diameter is only a little less than one-third the average diameter of the white corpuscles, and any one who has seen the extraordinary modifications of form which these little masses of protoplasm undergo in the course of their so-called 'amœboid movements,' would readily credit their capability of passing through such apertures. As the amœboid movement does not occur in the white corpuscles while rolled along in the torrent of the circulation, but only when the movement of the blood is arrested more or less completely, the fact that large numbers of white corpuscles do not habitually pass through the vascular walls into the tissues will not militate against the notion of patulous orifices. That a passage of the white blood corpuscles through the vascular walls does actually occur, is shown by the next picture.

"XI. Photograph representing white corpuscles in various phases of the amœboid movement, in the external coat of a small vein of the muscular coat of the stomach of a mare. From preparation No. 3382, Microscopical Section. Magnified 400 diameters by Wales's one-eighth objective.

"This preparation is one of a number of sections made from the stomach of a mare dead of gastro-enteritis. In these sections, which are stained with carmine and mounted in Canada balsam after the method described in the early portion of this paper, it was found that many of the small veins of the sub-peritoneal connective tissue and of the muscular coat were surrounded by white corpuscles fixed in all stages of the amœboid movement. In a number of places where the sections pass transversely through the veins, the white corpuscles can be observed in the interior of the vein, and in the vascular walls as well as in the adjacent tissue. The series of preparations gives a satisfactory demonstration of the wandering of the white corpuscles."

"It will be seen from the foregoing details that, so far as the structure of the vascular walls and the passage of the white corpuscles through them are concerned, the facts appear to be on the side of Cohnheim. How then with regard to the doctrine of inflammation which he builds upon these facts and upon his corneal studies? Does the creeping out of the white corpuscles constitute the essence of the inflammatory process? Do these little moveable masses of living protoplasm furnish the germs for the elements of new formations? Have pus corpuscles no other origin? Are the processes which go on in the cells of the inflamed tissue purely passive, mere phenomena of retrograde metamorphosis?

"I find the evidence insufficient as yet to afford satisfactory answers to such questions. The observations made by Cohnheim on the connective tissue corpuscles of the tongue of the frog are not conclusive in themselves, and Stricker's studies on the same subject show the necessity of further labor in this direction before the possible multiplication of these elements in inflammation can be denied. As to the doctrine that the white corpuscles, after their escape from the bloodvessels, are transformed into the elements of normal or pathological tissues, the facts hitherto brought forward can scarcely be said to do more than raise it to the rank of an ingenious hypothesis. The actual steps of this transformation, if it does occur, have yet to be observed."

We are glad to learn, from another source, that Dr. Woodward is prepared to furnish, at reasonable prices, fac similes of the photo-micrographic slides of the tissues he has succeeded in perfecting with so much care and skill. He now offers an aggregate of sixty lantern slides from specimens representing the anatomy of bloodvessels and blood corpuscles, miscellaneous tissue preparations and diatoms and other test objects. They can be thrown upon a screen placed before a class, and, in this manner, the most valuable investigations in histology can be displayed to a large audience at once.

The possession of such a collection—and we trust it will be largely increased—will prove a very valuable adjunct to the armamentarium of our professors in the medical schools.

OBITUARY NOTICE OF HON. APPLETON HOWE, M.D.

By Ebenezer Alden, M.D., Randolph.

Appleton Howe, M.D., of South Weymouth, Mass., died of apoplexy, Oct. 10th, 1870, aged 78.

He was the son of Rev. Nathaniel and Mrs. Olive (Jones) Howe, and was born in Hopkinton, Mass., Nov. 26, 1792. He graduated at Harvard College in 1815, and received the degree of Doctor in Medicine at the same institution in 1819. After leaving college, he was appointed assistant in Phillips Academy, Andover, where he officiated one year under the celebrated principal, Mr. John Adams. He then pursued his medical studies three years, as a private pupil of Dr. John C. Warren, at the same time attending the regular courses of lectures at the Medical College. When examined for his medical degree, he read and defended a thesis on bloodletting. He was admitted a Fellow of the Massachusetts Medical Society in 1823. He was one of the founders of the Norfolk District Medical Society in 1850, and its presiding officer for three years—from 1854 to 1856 inclusive.

In 1819 he was invited and settled as a physician in South Weymouth, Ms., where he was engaged in the faithful performance of the duties of his profession for more than half a century. In 1821 he married Harriet, daughter of Eliphalet Loud, Esq., who died without issue in 1848. In 1850 he was united in marriage to Eliza, daughter of Capt. Joseph Loud, by whom he had two children. The widow and a daughter survive to mourn his loss. Between the years 1822 and 1840, he held office in the militia of the State, and attained the rank of Major General of Division. He represented his district in the Senate of Massachusetts in the years 1840 and 1841.

Dr. Howe was decided in his convictions and opinions. That which was true and right commanded his prompt and earnest attention. Falsehood, duplicity and hypocrisy in all their forms he neither practised nor tolerated. In his profession, he was neither a timid nor a rash practitioner; not afraid to bleed or to give calomel in full doses when the condition of his patient required it. Dr. Howe sympathized with the sick. In their afflictions he was afflicted, and was ready to respond to their calls at all hours—to those of the poor as well as of such as could make compensation for his services. He was a wise and safe counsellor; not only as a physician, but as a friend. The community where he resided appreciated his character and honored him and themselves by the most implicit confidence.

In his intercourse with his medical brethren he was courteous, considerate of their feelings and reputation, and equally ready to receive, as to impart counsel. He was universally respected, and performed the duties of every trust committed to him—and they were many—with the most scrupulous fidelity.

Dr. Howe was equally decided in his views of religious truth as on other subjects. He held to the great facts and principles of divine revelation with a tenacious grasp. He was a liberal supporter of public worship, which he punctually attended unless prevented by the calls of duty. Yet from a strange self-distrust he never publicly united with the christian church. Towards the close of his last sickness, the cloud which had so long obscured his vision was taken up. He saw clearly, and no longer through a glass darkly; and he was enabled to say, "I trust only in Christ. How precious is he to me at this hour."

For several years before his death, he had premonitions of disease in the chest, and probably of the heart; often obstructing the circulation, producing severe paroxysms of difficult respiration; sometimes dropsical effusion, and finally culminating in apoplexy, with convulsions, which soon terminated his valuable life.

In his social character, Dr. Howe will be long remembered, as a warm and generous friend, an affectionate husband, a kind and indulgent parent, and good citizen.

For some years he had in a great measure relinquished the arduous duties of his profession to his able associate and successor, the man of his choice, with whom his relations were most intimate and agreeable.

He is gone, too soon for his friends and the world, if not for himself. His life was a benediction, and his end was peace.

THE INTRODUCTORY EXERCISES BEFORE THE MEDICAL CLASS.—The winter course of lectures in the eighty-eighth session of the Medical Department of Harvard University was inaugurated on Wednesday, the 2d inst., by the usual introductory exercises. After a prayer by the Chaplain of the University, Rev. Dr. Peabody, an address was delivered by Prof. White, which was listened to with marked attention by a large audience of physicians and students. We have already, in the last number of the JOURNAL, given our patrons an opportunity to read the address in full.

CASE OF NASO-PHARYNGEAL POLYPUS; OPERATION BY REMOVAL OF THE SUPERIOR MAXILLARY BONE.—M. Verneuil related a case of removal of a naso-pharyngeal polypus before the Sociétié Impériale de Chirurgie, which excited some discussion before that body, which we extract from the *Gazette Hebdomadaire* of August 19th.

A child, 16 years of age, of a good constitution, entered the Hôpital Lariboisière on the 16th of June. In the month of October, 1869, the disease first showed itself by a slight difficulty of respiration, with occlusions of the left nasal fossa and epistaxis. In December, the left cheek became swollen, and hearing disappeared on that side.

On her admission to the hospital, there was noticed a tumor on the left cheek, the size of a turkey's egg, firm, slightly movable, not adherent to the skin. The left nasal fossa was closed by the tumor. The velum palati was depressed. Exophthalmos was commencing on the left side. Snoring respiration, only, by the mouth; complete deafness on the left side. Deglutition somewhat difficult. No pain. Vision perfect. A naso-pharyngeal polypus of considerable size existed on the left side, springing from the base of the cranium, filling the pharynx and sending prolongations into the nasal passage, the maxillary sinus, the orbit and the pterygo-maxillary fossa.

Operation, the 29th of June. The patient was chloroformed. The superior maxilla was removed rapidly and without hæmorrhage into the mouth. A polypus was found, having a network of vessels, which poured out blood freely. The pedicle was about three centimetres in diameter, attached high up in the pharynx, so that it was reached with difficulty. M. Verneuil removed the polypus in portions. The blood collected in the mouth. Forceps were applied to the pedicle, but the blood nevertheless did not cease. The patient was removed to bed, when syncope supervened. The blood was drawn out from the air passages, and air admitted. The child began to cry, when the hæmorrhage, which had been arrested by the syncope, recurred. The same means for resuscitation were attempted, but the patient succumbed, in spite of efforts for resuscitation. M. Verneuil thought that the erect position, which he had adopted, with a view to arresting the hæmorrhage, had been the cause of death, and not the action of the chloroform. M. Le Fort considered that the chloroform had predisposed the patient to syncope, and had been to a great extent the cause of death. MM. See and Liégeois expressed the opinion that the death ought to be attributed to asphyxia by the penetration of blood into the air passages. M. Forget coincided with this opinion, and called attention to the fact that the recurrence of the symptoms at every fresh entry of blood into the air passages, and the momentary resuscitation on the removal of the blood and the admission of the air, showed that asphyxia and not syncope was the cause of death.

The Edinburgh Medical *Journal* of September, 1870, has an article by Dr. Charles Kidd upon the "Medico-legal bearings" of chloroform. Having in previous writings advocated its employment in surgery, the object of this paper is to show that "sensation novelists, jurymen," &c., misapprehend the nature of chloroform, and further to inquire what are the weak points associated with its fatal effects.

He does not agree with Dr. Richardson that "the right side of the heart is the chief weak point," for, as a rule, of nearly 400 accidents now collecting from chloroform the patients were in rude health." "Blood coagulates," says Richardson, "because it does coagulate; that is the amount of our knowledge: chloroform kills because it does kill."

In regard to deaths which may have been accidental and improperly ascribed to chloroform, he remarks that "the distinction is perhaps too fine for juries, but might benefit a surgeon, or save the character of chloroform itself."

Referring to the death of Dr. Toynbee, which had been unjustly attributed to suicide, he says that "his body presented the appearance of one who had died while inhaling chloroform." His notes at the side of his couch showed that he had been studying its effects on the Eustachian tube.

"The body was like that of the son of one of the surgeons at our chief Hospital, who also died while inhaling chloroform for tic douleureux."

Finally, Dr. Kidd goes on to say that "the details of this case given at the time with the equally exact appearances of six other cases of coroner's inquest, of a like kind, have led me to conclude that much is to be learned and much corrected."

The Intestines and Abdominal Viscera cut through by the passage of a Railway Train over the body with scarce any injury to the Abdominal Walls.—R. A., æt. 19, was found lying on his back, just inside Euston Station, straight across the outer rail, with his head between the rails, and his hat tilted over his eyes. He was alive when found, but dead in a few minutes. The body was at once brought to University College Hospital. It was clothed in a long jacket, waistcoat and trousers of thick, coarse cloth, on which the marks of the carriage-wheels were plainly visible. Only a few pence were found in his pockets. There was not the smallest wound on the body, and only a few abrasions of cuticle across the abdomen. After some hours, pretty extensive ecchymoses appeared. On opening the abdomen, all the abdominal muscles were found completely cut through, horizontally, retracted, and curled up, leaving a gap five or six inches wide. The back muscles were in the same condition. The right kidney was cut in half. The transverse colon and a large piece of the ileum were lying free in the abdomen; and the body of the third lumbar vertebra was crushed literally to powder; everything was divided except the skin. The rest of the body was healthy.—*British Med. Journal*, Aug. 20th, 1870.

Dr. Daniel E. Dodge now has charge of the New York State Inebriate Asylum.

Medical Miscellany.

Convolvulin and Jalapin as Purgatives.—Drs. Köhler and Zwicke published an essay in *Neues Jahrb. f. Pharmacie* on this subject, the following being their conclusions:—

1. That the purgative action of these substances depends on the presence of bile in the bowels, with which they may mix and be dissolved. Whilst 0·3 grm. caused death administered to a guinea-pig, by producing enteritis, as much as 1 to 2 grms. could be given without effect when the ductus choledochus had previously been tied.

2. The drastic effect is due wholly to local irritation of the mucous membrane. They injected snbcutaneously and into a vein as much as 0·5 to 1·5 grm. without any effect.—*N. Y. Med. Record.*

Carbolic Acid Internally in Syphilis.—In the *Arch. f. Dirmat. und Syph.*, Dr. M. Kohn reports the results obtained by Prof. Hebra. The acid was generally given in pill, and was used only in the exanthematous forms of the disease with any apparent success. These, however, improved or disappeared under the use of the remedy in four to seven weeks. Hebra cannot recommend this agent, since mercurials act much more quickly; and the carbolic acid is quite ineffectual against the nocturnal pains and affections of bones and joints.—*Ibid.*

Cause of Gonorrhœa.—Prof. W. A. Hammond, of New York, in his "Lectures on Venereal Diseases," asserts his belief, which he supports by cases, that gonorrhœa may be introduced either by the virus of hard chancre, or by the virus of soft chancre, when the chancrous matter has been deposited for a certain length of time upon the mucous surface, without any abrasion being present, or without any chancre following. Vaginitis and urethritis may be induced by other causes, but true gonorrhœa owes its origin to the contagion of chancrous pus alone. He also believes that the gonorrhœa induced by the matter of a hard chancre will be followed by and may impart constitutional syphilis, just as if a chancre had been present. Dr. Hammond's opinions in this respect coincide with those of Hunter. The experiment of Ricord appeared to have finally decided the question that gonorrhœa was incapable of producing syphilis, and that they were totally different disorders. But the conclusions arrived at by Dr. Hammond are:

"1st. That the virus of an infecting chancre, when deposited on a secreting mucous surface upon which there is no solution of continuity, may give rise to gonorrhœa unattended by chancre, but which is syphilitic in its character, and capable of producing constitutional disease.

"2d. The matter of such a gonorrhœa is capable of causing an infecting chancre, either by natural or artificial inoculation, which chancre is followed by constitutional syphilis."

Similar propositions are made about soft sores.—*Med. and Surgical Reporter.*

Massachusetts General Hospital.—Dr. J. C. White has resigned the place of Visiting Physician, and been appointed Physician to patients with Diseases of the Skin.

German surgeons complain of the ill-timed zeal of some missionaries who visit all the hospitals and distribute tracts among the wounded, pointing to their probable death, and calling on them to repent their sins. They say it is imminently necessary to keep the wounded in good spirits, if a speedy cure is to be brought about. Orders have been given in consequence not to admit such injudicious persons to the sick rooms.—*Exchange.*

Corrections.—In the Journal for Nov. 3d, p. 295' first column, 2d line from foot, for "those other" read *the older*; second column, 8th line from foot, italicise the word "see"; next line, for "as" read *so*; p. 300, second column, 5th line from foot, for "Friday" read *Saturday*.

To Correspondents.—Communication accepted:—Iodide of Potassium in Asthma.

Books and Pamphlets Received.—The Pathology and Treatment of Venereal Diseases; including the Results of recent Investigations on the Subject. By Freeman J. Bumstead, M.D., New York. Third Edition, revised and enlarged. With Illustrations. Philadelphia: Henry C. Lea. Pp. 704. (From A. Williams & Co., Boston.)—Twenty-second Annual Report of the New England Female Medical College, Boston. Pp. 24.—Physical Degeneracy. By Nathan Allen, M.D., Lowell, Mass. Pp. 40.

Married,—In this city, Nov. 1st, Dr. Frank W. Draper to Miss Fanny V. Jones, both of Boston.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending Nov. 5, 1870.

Cities and towns.	Total.	Prevalent Diseases	
		Consumption.	Typhoid Fever.
Boston	117	22	8
Charlestown	12	1	1
Worcester	8	0	0
Lowell	18	3	1
Milford	1	0	1
Chelsea	7	3	2
Cambridge	14	3	0
Salem	4	0	0
Lawrence	5	0	0
Springfield	5	0	1
Lynn	9	2	2
Fitchburg	5	2	1
Taunton	11	2	2
Newburyport	4	1	0
Fall River	7	2	0
Haverhill	3	0	1
Holyoke	6	1	1
	236	42	21

From all the above-named places there are reported 17 deaths from pneumonia, 13 from croup and diphtheria, 9 from dysentery and diarrhœa, 7 from cholera infantum, and from whooping cough. Holyoke reports two deaths from smallpox since Oct. 22.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Nov. 5th, 117. Males, 53; females, 64. Disease of the bladder, 1—inflammation of bowels, 1—congestion of the brain, 3—inflammation of the brain, 3—disease of the brain, 3—bronchitis, 4—consumption, 22—convulsions, 3—cancer, 2—canker, 1—croup, 3—cholera infantum, 3—debility, 3—diarrhœa, 5—diphtheria, 2—dropsy, 1—do. of the brain, 3—erysipelas, 1—scarlet fever, 1—typhoid fever, 8—homicide, 1—disease of heart, 1—infantile disease, 1—disease of the kidneys, 3—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 5—marasmus, 5—old age, 3—paralysis, 2—peritonitis, 1—premature birth, 2—puerperal disease, 2—rheumatism, 1—suicide, 1—syphilis, 1—teething, 2—tumor, 1—unk'wn, 5—whooping cough, 3.

Under 5 years of age, 47—between 5 and 20 years, 12—between 20 and 40 years, 30—between 40 and 60 years, 16—above 60 years, 12. Born in the United States, 75—Ireland, 30—other places, 12.

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A CASE OF PROGRESSIVE MUSCULAR SCLEROSIS, WITH A PAPER ON THE SAME.

By William Ingalls, M.D., one of the Physicians to The Children's Hospital, Boston, and S. G. Webber, M.D., Boston. Read before the Suffolk District Medical Society, Sept. 24th, 1870.

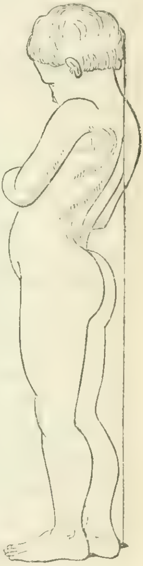
J. S., of Irish parentage, five years and two months old, was admitted into "The Children's Hospital" on the 2d September, 1870. To the age of three years he was quite a healthy child, but at about that period he began to move and act as though he had less strength than usual, and by degrees his mother came to acknowledge that such was really the case; this condition increased and the spinal column became very weak, and the "inward crook" of it was noticed by her.

Two weeks before admission he had a whitlow upon the fore-finger of his left hand, and one week before, he had a fall while attempting to run upon a sidewalk; from the first event the mother dated the special failing of his health, which she thought was increased by the second, and the evident decrease of his vital powers induced her to seek for him the benefits of the Hospital.

When first seen by the writer, the child was sitting in a corner of his bed, a soft pillow being behind him, he being in such a position that if a line had been carried from the end of the spine, over it, to the back of his head and continued on the same curve, it would have formed a circle, or nearly so.

On the day after admission, Dr. Webber saw the patient with me, and at once recognized the disease. We caused him to stand upon the floor, and he walked a few steps in a tottling or shambling manner. The spine presented a regular and exaggerated curve inward, from the third or fourth dorsal vertebra to the sacrum. This shape comes well under the name given by Duchenne—"saddle-back." A perfect picture of this child may be seen in Duchenne's book, éléctrisation localisée, 2nd edition, 1861, p. 355.

The head, while he was standing, and indeed while he was in any position which might have been called upright, gave to the spectator the idea that it was large and heavy, for the chin rested upon the sternum, and was inclined more to the right shoulder than to the left. A copy from Duchenne is presented.



The muscles of the calves were largely developed, and the nates *seemed* to be so.

Upon attempting to take food, or even water, there was always a great choking and inability to swallow, so that it may be said he took no nourishment. He died on the fifth day after admission, having had convulsions on the day of his death. There was no post-mortem examination, but he undoubtedly died of pneumonia.

The want of precision and completeness in the history of this case is owing to the incapacity of the mother, and not to any want of diligence on the part of the interrogator; such as it is, it seems to introduce a valuable paper on the subject of the disease, by Dr. S. G. Webber.

The name placed at the commencement of this article is that used by Jaccoud, and is expressive of the change characteristic of this disease. Other names proposed are: progressive paralysis with apparent hypertrophy; pseudo-hypertrophic paralysis; progressive myosclerosis; and by Heller the long name "lipomatosis luxurians musculorum progressiva."

The first case of this disease was noticed only about twelve years ago. We have been able to find the records of only 41 cases; 21 in German, 13 in French, and 7 in English medical journals. Among the American journals which we have seen, no case has been recorded, though the disease has been described by Dr. Clymer. We have been able to find also the references to a few German cases.

As this disease has attracted considerable attention from foreign observers, and its true pathology is not settled, and as, so far as we know, no case has yet been reported in American Journals, the present opportunity is taken to call the attention of the profession to it, that other cases may be reported, and if possible some light may be thrown on its etiology and pathology. Careful autopsies are especially desirable.

Duchenne noticed a case of this disease in 1858, and during the next three years saw several others, so that when he published his work on electricity in 1861, he narrated one of them, and spoke of the disease under the name "hypertrophic paraplegia of childhood from cerebral cause." This name shows the theory which he then held in regard to the cause of the disease. This theory was subsequently abandoned for another. The accompanying wood-cut, which is copied from Duchenne's case, might have been drawn from our patient, so nearly does it resemble the peculiar attitude assumed while he was standing.

Duchenne continued to collect cases of the same affection, and in 1868 published a memoir in the Archives Générales, entitled, "Investigations in regard to pseudo-hypertrophic muscular paralysis or myosclerosic paralysis."

During the time between the appearance of these two articles, several cases were observed in Germany, and advance had been made by Griesinger, Wernich, Heller and Cohnheim, in the study of the pathology of the disease.

It cannot be said that this is a new disease, for cases were seen before Duchenne separated this from the other forms of paralysis which occur in children. But such cases were referred to some other head, or considered anomalies and no attempt made to classify them. The most celebrated observations before Duchenne's were four cases noticed by Edward Meryon. On referring to these there would seem to be room to doubt whether they were all cases of this disease: two seem to have been.

Duchenne, having examined twelve additional cases, published his memoir, founding his description of the disease chiefly upon his 13 cases. Some of his cases had terminated fatally, only two had improved, one of these is said to have recovered.

To Duchenne, then, belongs the merit of having first recognized this as a distinct form of paralytic disease.

The accompanying table will give an idea of how much has been done and how many cases have been recorded, and will give an opportunity of comparing the symptoms which were present.

From these cases, and from the account given by Duchenne, the symptoms may be described as follows:

The disease frequently commences in early infancy, before it is time for the child to walk. Of 41 cases where a tolerably full account of the origin is given, the statement is made in 11 that the child did not walk until late, from 17 months to 3 years, and then its walk was unsteady, accompanied with frequent stumbling and falls. If the child has begun to walk at the usual time, the disease commences "without pain and without previous fever, sometimes after convulsions; the child quickly becomes tired while walking or standing; soon he falls frequently; he can run with difficulty, or not at all, and finally becomes disinclined to walking, but desires to be carried." Soon the legs are separated from each other even while the patient is standing; the walk becomes peculiar, "at each step the body is inclined to the side whose foot is on the ground, hence they have a waddling gait." In cases where this gait is seen in healthy children it quickly disappears. "A very constant symptom is the presence, only while standing, or walking, of a lumbo-sacral curve." "A plumb-line falling from the most posterior spinous process, passed at a greater or less distance posterior to the sacrum." Duchenne considers this attitude due to the weakness of the principal extensors of the vertebræ. Later in the disease occurs bilateral equinus, which gradually increases in extent, and becomes equino-varus. The weakness and inability to walk increase until the patient becomes helpless.

The marked feature of this disease, which has given it its title, does not appear until some time after the weakness is observed. This is the pseudo-hypertrophy of certain muscles. Once only, case 35, is it stated to have been noticed with the other early symptoms, and in that case it is possible that the earliest symptoms had been over-

PROGRESSIVE MUSCULAR SCLERORIS.

No.	Author and Reference.	Patient.	Age at time of Observation.	Age at commencement of Disease.	Time of beginning of hypertrophy.	Time during which hypertrophy increased.	Family History.	Electro-muscular contractility.	Deformity.	Results and Remarks.
1	Duchenne. Arch. Gen. 1868. 1. Case I.	M.	7 years.	Early. Did not walk till 2½ years old.	Noticed at about 3 years.	During 2 years.	No one similarly affected.	Perfect.	Muscles of the legs and lumbar region enlarged. Arms small. Equino-varus.	At 13 years of age paralysis was complete. Died at 15 years of phthisis.
2	Ibid. Case II.	M.	5 or 6 y.	B'n with large limbs. Never walked.	Noticed in infancy.		None obtained.		Legs large. Arms & body emaciated	Sensation perfect. Intelligence weak.
3	Ibid. Case III.	M.	8 years.	Did not walk till 2½ years.		3–4 years.	Two brothers died of granular meningitis.	Unaffect'd	Gastrocnemii, glutei, lumbar, temporal masseter muscles large. Double equinus.	No pain, nor disturbance of sensation. Intelligence weak. At 11 yrs, arms affected, without hypertrophy and paralysis complete in legs. At 14 yrs, died of pleuro-pneumon.
4	Ibid. Case IV.	M.	9 years.	6 years.	5–6 mos. later.	About one year.	No similar disease in family.		Calves, buttocks and lumbar region enlarged.	At 13 years had lost all power over arms as well as legs.
5	Ibid. Case V.	M.	7½ years.	Did not walk till 3½ years.		Till 4 yrs. old.			Calves, thighs and lumbar region enlarged.	Intelligence weak.
6	Ibid. Case VI.	M.	10–11 y.	At 2½ years.	Noticed at 3–4 yrs. of age.	About two years.	No one affected.	Normal.	Calves, thighs and buttocks enlarged.	No pain, nor disturbance of sensation. At 14, paralysis became general.
7	Ibid. Case VII.	M.	8 years.	At 5 years, with convulsions.	A few mos. later.	About one year.		Diminished in paralyzed muscles.	Calves, buttocks and lumbar region enlarged. Also temporal muscle.	At 6 years, weakness of arms began. At 11 years, arms and legs entirely paralyzed.
8	Ibid. Case VIII.	M.		At 2½ years, with convulsions.	Some mos. later.			In 1862 not affected. In 1864 diminished or abolished.	Calves, buttocks and thighs enlarged.	In 1865, paralysis complete. Intelligence normal. Died of phthisis in 1866.
9	Ibid. Case IX.	M.	8 years.	At 7½ years, without fever or convulsions	3–4 mos. later.				Gastrocnemii slightly enlarged.	Cured in six months.
10	Ibid. Case X.	M.	8 years.	Began to walk at 17 months, but fell often, and rose with difficulty.	At about 4 years of age.	One year.		Normal.	Calves, buttocks and lumbar region enlarg'd. Arms small. Equino-varus.	Large head. Intelligence good. At 13 yrs., almost deprived of movement. Volume of hypertrophied muscles diminished.
11	Ibid. Case XI.	F.		Never strong; walked well till, at 10 years, she became weak.	Some time later.			Diminished in lower extremity.	Double equinus. Calves enlarged.	
12	Ibid. Case XII.	M.	10 yrs.	Did not walk till 26 months old.			Nothing similar known. Parent's and mother's children healthy.	Enfeebled.	All the muscles, except the pectorals, greatly enlarged.	Could walk to school, 1 kilometre, till 8 years old. Intelligence less than normal.

No.	Author and Reference.	Patient.	Age at time of Observation.	Age at commencement of Disease.	Time of beginning of hypertrophy.	Time during which hypertrophy increased.	Family History.	Electro-muscular contractility.	Deformity.	Results and Remarks.
13	Ibid. Case XIII.	F.	6½ yrs.	Did not walk till 2 years, but walked well. At 4½ to 5 yrs, fell frequently.	About 4½ to 5 years old.			Normal.	Legs and thighs enlarged slightly.	Precocious. No disturbance of sensation. Nearly recovered.
14	Heller. Arch. f. Klin. Med., i. 6, p. 616, 1866. Sch. Jahr., 1866, p. 286.	M.	11 yrs.	6 years.			Two analogous cases in the same family on the mother's side—brother and half-brother.	Rather diminished.	Lower extremities, with glutei, abdominal and spinal muscles, enlarged. Rest of body rather small.	Skin of lower extremities purple, marbled. Sensibility normal.
15	Ibid.	M.	16 yrs.	9 years.			Same as in No. 14. Brother to 14.	Abolished.	Same, in greater intensity. Some muscles in upper extremities enlarged.	Same, and also loss of intelligence. All 4 (14 & 15) dwelt in a damp, cold dwelling, unfavorable to health.
16	Wernich. Deu. Arch. f. klin. Med., ii. 2, p. 232, 1866. Schmidt's Jah. 1866, 4, p. 295.	M.	11 yrs.	Did not walk till 3 years old.	Began in 7th year.		Brother 5 yrs old showed beginning of same disease. Half-brother healthy.	By nerve irritation normal. By direct diminished.	Calves, tensor fascia latæ, sartorius, rhomboideus, infra-spinatus and deltoid enlarged; other musc. wast'd.	Sensation normal. Skin of forearm and leg marbled. Increase of fatty tissue between fibres of muscle.
17	Stoffella. Wien. Zeitsch., xxi., 1, p. 85, 1865. Schmidt's Jah. 1865, 4, p. 179.	M.	13 yrs.	Not long before first paralytic symptoms appeared after variola and measles.	A short time later.			Dimin. in aff. mus. & others. E-mus. sen. norm. or inc. in leg.	Calves, extensors of thighs, deltoid, tricipit, sacro-lumbalis, and longissimi dorsi, were hypertrophied.	No material change after several months' treatment by electricity.
18	Griesinger. Arch. d. heilkund, vi., 1, p. 1, 1865. Schm. Jahr., 1865, 4,	M.	13 yrs.	Weak, with slight thickening of legs in earliest childhood. At ten, became worse.	About 10 years.			Decreased.	Deltoid & the scapular muscles, those of arm, quadratus, lumbar and rect. abdom. affected.	Sudden twitchings in thighs; marbled surface in legs and arms, and cool.
19	Hoffmann. Ueber die sogenannte Muskelhypertrophie. Berlin, 1867. Canstatt's Jahr., '67, 2, 1, p. 294.	F.	17 yrs.	In 11th year measles. In 12th year gradually unsteadiness, and inability to run.	In 13th year.		Parents and 1 brother healthy; 7 sisters dead, several from convulsions during teething.	In arms moderate. In legs dimin. In thighs good. Sensibility normal.	Muscles of calves enlarged. Atrophy of ant. edge of trapezius, more so on the right; so of deltoid and arm. of the subscapularis, latissimi dorsi and under part of trapez. Bones normal size. Saddle back.	At 12 years, lost power in right arm, and then in left arm. Muscles of lumbo-sacral region became weak at the same time. Skin of hand and leg mottled; leg cool. Atrophied and hypertrophied muscles weakened.
20	Seidel. Die Atropie Musculorum Lipomatosa (soge-	M.	16 yrs.	At 9 years pain in walking fast and jumping. Chills.	14 years.		This boy and the next two were brothers. There were 6 other children, who were not affected, though the youngest did	Dimin. in all the muscles.	Upper arm and thigh atrophied, leg and forearm hypertrophied. Equinus.	Scrofulous in early life; meas. & scarlat. With loss of power in feet, arms weak. Intell. good; little impr. by induc. cur.

21	nannte muskelhypertrophie, Jena, 1867. Centralblatt, 1867, p. 666. Canstatt's Jahr., 1867, 2, 1, p. 295. 3 cases.	M.	14 yrs.	At 11th or 12th year growth less than normal. At 13 yrs. weakness.	12 years.		not enjoy good health. The parents were healthy.	Dimin. in legs and biceps.	Deltoid, biceps and thigh atrophied. Triceps, brach. and calves hypertro.	No spontaneous twitching. Did not improve. For ½ yr. frontal headache. Temp. rather dim. in axilla. No change in sens.
22		M.	12 yrs.				Ditto.	Tib. ant. & flex. digit. com. long. dimin.	Left calf slightly enlarged.	This child was examined in the earliest stage. These 3 lived well, but eat little meat.
23	Roquette. Ueber die sogenannte Muskelhypertrophie. Inaug. Diss. Berlin. 1868. Canstatt's Jahr., '68, 2, 1, p. 268.	F.	20 yrs.	At ten could not run so well as before.	Next year.		No hereditary disease.	Dimin. in affected muscles.	Pectorals, latis. dorsi, serrati, and erector spinæ atrophied. Neck, thighs normal. Calves hypertrophied. Varo-equinus. Saddle-back.	Good dwelling; well nourished. No mental trouble. Catamenia in 15th year. At first anæsthesia. Hands weak for several years. Skin of legs marbled. Skin on the feet ichthyosis.
24	Benedikt. Elektrotherap. Wien. 1868. p. 188. Case 193.	M.	8 yrs.				Younger brother had the same.	Dimin. in legs and thigh. In outer part deltoid almost gone.	Both calves, flexor of thighs sacro-lumbar left, outer part both deltoids, most of muscles of leg hypertrophied.	Improvement in power of walking and running by galvanizing sympathetic. Hypertrophy not diminished.
25	Ibid. Case 194.	F.	8 yrs.					Glutæi, elec. mus. cont. dim. Sens. increased.	Both sacro-lumbal. atrophied. Both glutæi hypertrophied. Saddle-back.	Improvement by same means as previous case.
26	Ibid. Case 190.	M.	11 yrs.	After a fright at three years.					Most of those of the leg and pelvis, longissimi dorsi, especially left, hypertrophied. Club-foot.	Intelligence normal.
27	Ibid. Case 191.	M.	About 40 yrs.	Probably a few years sooner.				Dimin. in hypertro. and some mus. Elec. mus. sens. increased.	Thigh and pelvic muscles, anconeus left, both sacro-lumbalis, pect. maj. serratus ant. maj., especially right and abdominal muscles hypertrophied.	Formerly melancholia and epileptic imbecility. Hypertrophied muscles are paralytic. Sensation diminished in many places.
28	Ibid. Case 192.	M.	30 yrs.	Perhaps two years earlier.					Deltoid right, pect. maj., teres maj. & min., serrat. ant. maj. right, glutæi, add. of thigh & mus. of leg hyper. In 1 yr trap., supra-spin. right, hypertroph'd.	Pain and weakness in right shoulder, seemingly in the bones. Right side face redder and sweats more than left. Right pupil dilated. Sympathetic tender on pressure. Improved on galvanization and hypertrophy diminished.

No.	Author & Reference.	Patient.	Age at time of Observation.	Age at commencement of Disease.	Time of beginning of hypertrophy.	Time during which hypertrophy increased.	Family History.	Electro-muscular contractility.	Deformity.	Result and Remarks.
29	Eulenberg. Berlin klin. Wochen., ii. 50, 1865. Schmidt's Jahr. 1866, 1, p. 291.	M.	13 yrs.	At about five years began to walk unsteadily.			Healthy.	Retained.	Parts of legs, arms & body enlarg. Neck normal. Double varo-equinus.	Intell. & sens. norm.; at 10 or 11 yrs. saddle back; impr. by Faradiza. and gymn. Died at 13 of broncho-pneumonia.
30	Sigm. in Tüb. Arch. f. klin. med., 1, 6, p. 630, 1866. Schmidt's Jahr., 1866, 2, p. 285.	M.	14 yrs.	Began to walk late & always unsteady.			Nothing similar.	Some of aff. mus. lost it. oth's w'k.	Lower limbs as high as glutæi.	Skin of lower extremity marbled, purple and cool. No improvement.
31 & 32	Coste & Gioja. See Schmidt's Jahr., vol. 24, referr'd to in same, vol. 130, 1866, p. 285.	Two bro's.		At 10 years.					All four limbs.	One at 18, tongue and muscles of jaw hypertroph. Genitals not devel., and bones atroph. Other died of heart disease.
33	Lutz. Arch. f. klin. med., iii., 4, p. 358, 1867. Schmidt's Jahr., 1868, 1, p. 171.	F.	28 yrs.	In childhood, age not stated.			Uncle & aunt, mother's side, had do.; died at 42 & 43 yrs. Half-sister f'm mothr's 1st mar. had it; died at 6 yrs., of scarlatina.		Calves, and to back enlarged; arms and up. part body ema. face & neck normal.	Voluntary movement in lower extremity gone.
34	Ibid.	Sister to above.	22 yrs.	At an early period.					Only lower extrem enlarg. Upper norm.	Parents of these two were related.
35	James Russell. Med. Times & Gaz., May 29, 1869, p. 571.	M.	11 yrs.	10½ years.	At once, in calves.		Grandmother had hemiplegia. Elder brother had progressive paralysis. Otherwise good.	Not all muscles respond.	Erector spinæ, hips & calves enlarged.	Legs ached, hands & feet numb. Legs mottled. Brother, mus. same appearance by microsc.
36	Ibid.	M.	10 yrs.	3-4 years legs failed.	Early in disease.	Until 6 years old.	Great uncle on mother's side paralyzed. 2 uncles walk'd till 9, then paralyz'd; died at 16 & 17 years. Rest of 8 living child. healthy; 3 died yng. Patient's mother had 8 liv. child., healthy at birth; 1 boy lost power at 4, died at 16. Another lost power at 9, died at 13; no hypertroph., but limbs wasted. 3 girls 4 to 8 yrs. old, healthy.		Calves enlarged.	No pains; never lost power of walking. Right hand grasps more feebly than left. Not dull.
37	B. W. Foster. Lancet, May 8, 1869, p. 629.	M.	9 yrs.	Weak in legs, walked at two years, stumbled much.	6 years.		Eight children, one died scarlatina; two boys older, two girls younger, healthy.	Unaffected.	Calves, erec. spin. enl. Thigh firm, not enl. Talipes equinus.	Dull intell. Arms always weak. Legs and arms mottled. Muscles of arms flabby.
38	Wm. Adams. Trans. Path. Soc. London, vol. xix., 1868.	M.	7½ yrs.	About six years old.			An elder brother 16 years old is unable to walk, helpless.		Calves, delt. & several of fore'm enl. thigh & arm small. Equi.	Dull intellectually, mischievous, dirty.
39	Ibid.	M.	11 yrs.							Unable to stand.
40	Dr. Hillier. Trans. Path. Soc. London, vol. xix., 1868.	M.	nearly 11 yrs.	Stood at 21 months old, & then walked imperfectly.	3 years.		Nothing similar.	No loss.	Calves enlarged. Erector spin. and quad. lumb. bulge.	No fits; no pain. 6 to 7 years, stumbled. At 10⅝ yrs. c'ld not stand. Arms wasted after 5 yrs.
41	D. Dyce Brown. Ed. Med. Jour., June, 1870, vol. xv., p. 1079.	M.	26 yrs.	26 years.	3 months later.				Thighs, calves, oblique, abdom., triceps, large. Also, later, glutæi. Forearm and hand thin.	At first rheumatic pains in thighs. In eight months, gained five pounds.

looked. It is this apparent hypertrophy which tends to deceive the friends of the youngest patients, and causes wonder that a child with such well developed legs cannot walk sooner.

The hypertrophy usually attacks the muscles of the calves, sometimes the glutæi, and the lumbar muscles, less frequently those of the upper extremities, and once only was it almost general. Any muscle may be hypertrophied, but those of the lower extremities are more frequently so. While many muscles are thus enlarged, others are atrophied, and others partially paralyzed. Duchenne says, "In this disease all the muscles paralyzed are not always attacked with apparent hypertrophy, and the degree of paralysis is not in direct ratio to this hypertrophy."

The disease may remain stationary at this stage for many years, after which the weakness increases; the advancing paralysis is accompanied with emaciation, and, "finally, after having lived still one or two years in a state of marasmus and helplessness, these children are carried off by some intercurrent disease."

Accompanying the other symptoms, there is often a loss of intellectual power, chiefly when the disease commences in earliest infancy. Again, when beginning later, it is occasionally preceded by a high degree of intelligence.

The circulation is frequently materially affected, especially in the lower extremities. Duchenne did not notice this, but several other observers, German and English, have observed it.

Boys have been more frequently the subjects of this disease than girls. Of 45 cases, 7 only were girls.

The duration of the disease is rather indefinite. It is a chronic affection, extending over years, and rarely terminating until after, at least, five or six years. In two cases, 33 and 34, the patients were seen at the ages of 22 and 28 years. An uncle and aunt of theirs were said to have had the same disease, and died at 42 and 43 years. The cases which terminated fatally show that there is a tendency to die from some lung complication. Once heart disease was the cause of death, and a half-sister of one of the patients, whose case is only alluded to, died of scarlatina. The natural termination would seem to be by weakening the respiratory muscles to give rise to a predisposition to fatal lung affection.

Little is known as to cause. In only two cases is locality, damp and cold dwelling, mentioned as a possible cause. Duchenne states that in 20 years he had never seen any similar affection among adults, and, in the cases recorded by others, the beginning is generally referred to early childhood. In the two cases in adults mentioned by Benedikt, the origin is not directly mentioned, but it would seem to have been within a few years. The case reported by Dr. Dyce Brown, concerned an adult. These three are the only cases in which the commencement is not referred to childhood or infancy.

Duchenne found no proof that hereditary taint had any part in causing the disease. It will be seen, however, by the cases mentioned by others that there has been, in several instances, a tendency in certain families to be affected. In eleven cases, the disease existed in other members of the family. Two of these cases were brothers, and two were sisters; three others were brothers. In two cases there were nervous affections in other members of the family; in one of these a brother was paralyzed without hypertrophy, but with increase of fibrous tissue between the muscular fibres, as is found in this disease.

It is curious to notice that, although boys are more likely to be affected, when the same disease has occurred in the family it was on the mother's side rather than the father's. Cases 14 and 15, mother's brother and half-brother were similarly affected; cases 33 and 34, uncle and aunt on mother's side had the same, half-sister from mother's first marriage also affected; case 36, great uncle on mother's side had paralysis, perhaps the same, mother's two brothers were paralyzed at 9, and died at 16 and 17. These are the only cases where distinction is made between the parents.

In some cases the disease is probably congenital. Case 2 was born with large limbs.

Neither rheumatism, syphilis, scrofula, nor any other disease can be traced as the cause of this paralysis; generally, the patients, when attacked after the first dentition, had been healthy up to the time when the weakness of the legs was first noticed.

The condition of the hypertrophied muscles was ascertained in one case after death, in other cases by removing small portions, either by cutting down upon them, or by the "*emporte-pièce histologique.*" There has been found an increase of the fibrous tissue between the muscular fibres; the latter have, in many cases, lost their striæ, though not becoming granular nor fatty. The fibrous tissue between the muscular fibres is unnaturally adherent to the sarcolemma, and cannot be entirely separated from it. Some German observers have seen great increase of fatty tissue between the muscular fibres. The latter condition is generally considered only a later stage of the disease. The hypertrophy is dependent on this increase of intermuscular tissue and not on any increase in the muscular fibres, which have sometimes been found diminished in diameter; only once have I noticed the statement that they were increased in size. The atrophied muscles may also show similar increase of fibrous tissue.

Only once was the central nervous system examined with care by Cohnheim, and nothing was found.

Perhaps it is premature to say much yet in regard to the nature of this affection. Only one autopsy has been recorded, and that with negative results. Eulenburg, Duchenne and others, are inclined to refer it to an affection of the sympathetic, and considering the mottled condition which is frequently seen, it seems not unreasonable to do so. Also, that tissue is hypertrophied which is considered as most likely to be increased by a change in the flow of blood through a part from paralysis of the vaso-motor.

It would be of interest to study this disease in its pathological relations in connection with increase of fibrous and connective tissue in other parts, as sclerosis of the nervous centres, also in connection with one-sided hypertrophy and local atrophies.

So far as relates to treatment there is but little to be said. Duchenne relates the recovery of one, and the probable recovery of another patient, under the use of the induced current, shampooing of the muscles and hydrotherapeutics. Both these cases were treated in the earlier stages. Benedikt used the constant current, applying the copper pole to the lower cervical ganglion, and the zinc pole to the lumbar region. Two cases improved under this, one of them also having the separate muscles faradized. In another case the current was applied only to the cervical portion of the sympathetic. There was also marked improvement in this case, amounting almost to a cure. All other measures prove unavailing.

Note.—After reading the above case before the society, it was stated, by some of those present, that the boy had been seen at the Boston Dispensary several times, and the case was there supposed to be tetanus. Dr. O'Connell, who saw the boy, made a record of his case, from which the following items are taken:

"The boy was first seen August 1st, with a superficial ulceration of the middle finger of the left hand, arising from a splinter. About August 20, there was noticed a stiffness of the neck, apparently an ordinary case of torticollis." About August 24th, he fell three times, and at about the same time, though subsequently to the falls, the mother noticed a peculiarity in his walk, and stiffening of the body. This stiffening continued to increase without any spasmodic action, and at the date when the notes were made, August 31st, there was "a constant state of opisthotonos," the torticollis being aggravated, "the chin being drawn down to the chest, and any attempt on his part to raise the head resulting only in a bending of his back still more. Now, it is only by a very struggling effort that he can balance himself on his legs. When he tries to stand, the opisthotonos is so decided that it almost pulls him over on to the ground. His abdomen is thrown forward; his legs are spread in his effort to sustain himself, and he has not, within the last few days, had sufficient command of himself to be able to walk at all. The muscles on the back of the neck and along the back are rigid and tense, those on the right side of the neck forming a hard swelling behind." "There is not any spasmodic action. The muscles involved persist in their action without any relaxation."

This is a graphic description of the appearance of a patient attacked with muscular sclerosis. The gradual advance of the inability to stand, the falling, the peculiar stiffness of carriage, the hypertrophy, and tension of the muscles of the back and neck, which, though apparently powerful, and seemingly strongly contracted, are in reality too weak, and hence the bending of the body, as if in a state of opisthotonos; the projection of the abdomen, upon the muscles of which devolve the duty of sustaining the patient, the bending forward of the head for preserving the centre of gravity, and the increase of the lumbo-sacral curve on raising the head. This unnatural posture disappears when the patient lies down. Though not mentioned in the notes, Dr. O'Connell told me that it was so with this boy. The position of the head, drawn to one side, was due probably to the muscles on one side of the neck being affected more than those on the other side. Dr. O'Connell considered it, not a case of tetanus, but a condition of constant spasm, due to the injury to the finger. Whether the finger had any part in accelerating the progress of the disease it is of course not possible to state, for the pathology of the disease is too little known to decide as to what would be the effect of such a condition. There is, however, no doubt, in our minds, judging from the above history and from the condition of the child when seen by us, that this was a case of muscular sclerosis.

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A CASE OF DELIRIUM TREMENS SUCCESSFULLY TREATED BY HYDRATE OF CHLORAL.

By William S. Bowen, M.D., Passed Assistant Surgeon, U.S.N.

Michael Burke, seaman extra, æt. 27, was received in the U. S. Naval Hospital at Chelsea, Mass., from the Navy Yard, Sept. 13th, 1870, suffering from a severe attack of mania a potû. He had been on a debauch for over a week, and for six days had not closed his eyes in sleep Physical prostration comparatively slight, but he had constant hallucinations of various kinds, amounting at times to maniacal delirium, so that he required constant watching to prevent him from jumping through the nearest window. Bowels constipated, great nausea, and total loss of appetite. Had been under treatment for three days previous to his entry in the Hospital, during which time opium, in its different preparations, digitalis, capsicum and infus. humulis, had been ineffectually used. Immediately after admittance, the patient was placed in a warm bath, at 98° F., and at 1, P.M., hydrate chloral gr. xxx. was given in solution, and an hour later gr. xx. more, as the first dose had no apparent effect. At 4½, P.M., patient expressed a desire for nourishment, but his stomach was unable to retain a pint of strong beef tea, seasoned with capsicum, that was given. At 8½, P.M., he became more excited and the hallucinations increased. Hydrate chloral ʒi., in water flavored with ol. menth. pip., was administered. Five minutes after, he was seized with convulsions similar to those of a person partly under the influence of ether or chloroform, and he unconsciously passed a large quantity of urine; this was followed by profound sleep, from which he did not awaken until 7½ o'clock the next morning, when he immediately expressed a wish for his breakfast, and was able to retain a hearty meal. He then had several hours more sleep, and the next day was free from all disturbance, save severe pains in the limbs, caused by wrenches in his previous struggle with the nurses. The hallucinations and gastric irritability disappeared after the first period of sleep. This, with the other cases reported in the Medical Journals, certainly goes a great way to prove the efficacy of this new remedy in the treatment of mania a potû.

Reports of Medical Societies.

OBSTETRICAL SOCIETY OF BOSTON. SECRETARY, DAVID F. LINCOLN, M.D.

MAY 14th, 1870.—The Society met at the house of Dr. Parks, at 7½, P.M.; the President, Dr. Buckingham, in the chair.

Dr. Buckingham read Dr. Swan's notes of a case of *placenta prævia* as follows :

"Sept. 5, 1869. Mrs. ——, æt. 34, primipara. *Placenta Prævia.*—The patient's physician being sick, Dr. Buckingham was engaged. He was called to the patient about 1″, P.M., in consequence of the occurrence of hæmorrhage. There had been other hæmorrhages from time to time. Patient's time was not up till the 25th inst. Dr. B. sent for me to assist. There had been no pain. The *os uteri* was dilated sufficient for the admission of two fingers. The placenta was felt, and no presentation could be made out in the ordinary way. I gave ether to full etherization. The patient took it quietly, and was not long in being etherized. Dr. B. then introduced the hand into the uterus, separating the placenta posteriorly (patient lying on left side), seized the first leg presented, which happened to be the left, and brought it down. The head had been presenting normally, and was already in the upper part of the pelvis. Version was easy on account of a certain amount of *liquor amnii* left. (A portion was noticed at the time of the hæmorrhage on the napkins, thus adding to the evidence that labor was commencing.) The breech was brought out by traction upon one leg, the other, flexed upon the abdomen, served to dilate the external parts and better prepare the way for the head. The arms were brought down before the head. The proper degree of rotation with traction in changing directions at length brought the head. The child, a large male, was born alive. The hand was immediately introduced, and the placenta, a battledore, at once removed. During this time the ether had been omitted, and I was engaged making firm pressure upon the *fundus uteri* and retaining the pressure after delivery. After this Dr. B. for a considerable time retained the fundus in the same way. The pulse was 70–76, rather soft. The amount of blood lost at the time of delivery is estimated at a quart. Patient continued to flow afterwards, and once Dr. B. removed a considerable quantity of coagulum from the uterus which, though obeying tolerably the pressure of the hand, would not remain contracted. Patient had had morphia and fluid extract of ergot, and it had been stated that she had eaten no dinner. After more morphia, ergot and whiskey, she vomited a pint of undigested food, partly boiled corn. This accounted for the fact that her medicines seemed to have no effect upon her. In spite of every effort, compression, ergot, morphia, &c., she continued to lose blood, her pulse grew weaker and fainter—so rapid and so soft that it could not be counted at the wrist, and finally small, thready and fluttering; skin cold and wet; lips alternately red and pale, with, on the whole, very little color in cheeks; increased restlessness, tossing violently about, clenching her hands, delirium, and, finally, death—not convulsive. After delivery, she made marked complaint of pain in back. Dr. B. has found this a frequent indication of hæmorrhage. She died about two hours after delivery.

"The foregoing is a verbatim copy of my record of the case, made, I think, on the following day, possibly on the evening of the occurrence.

"CHAS. W. SWAN, M.D."

The following are Dr. Swan's notes concerning the case of the child.

"Sept. 7th, 1869. 9, A.M.—Well, apparently, till yesterday evening, when it had symptoms of dying—lividity, absence of respiration for long intervals; would revive occasionally. This morning life seemed to be coming and going. Pulse at times down to 36, again up to 120, regular in the quarter minutes. Nothing abnormal by auscultation excepting an occasional double beating. Coarse mucous râles heard during auscultation of heart. Absence of respiration for several minutes; restored with occasional gasps, passing into more regular but more or less labored breathing.

"Dr. B. attending the patient. The child was supposed to be dead at one time this morning. Dr. B. was sent for, was out, but was at the patient's house when I arrived.

"The child died during visit with Dr. B. in the evening."

Dr. Parks read from "Barnes's Obstetric Operations" Dr. B.'s theory of uterine zones, and the author's objections to certain views regarding the cessation of hæmorrhage after detachment of the placenta.

Dr. Homans reported the following case:

Collapse following Normal Labor.—A woman, 18 years old, primipara, at full term. Labor lasted 24 hours; the pains were steady, severe and fatiguing.

Four hours before delivery, the os was of the size of a dollar; there was no show; the vagina was dry, hot, and very tender. In two hours more, ether was given in moderate quantities. The child when born weighed eleven pounds; the placenta followed in a very few minutes, and there was but little discharge of blood or liquor amnii. Dr. H. sat at the head of the bed a few minutes, when, suddenly, the patient was observed to be very weak, her pulse being 140; yet the uterus was contracted firmly, there was no hæmorrhage, nor could anything wrong be detected in the vagina by the touch. Brandy was given frequently, with 20 drops of laudanum at intervals, the whole quantity given amounting to two drachms of the latter, and one quart of the former, during the ten hours following delivery; champagne, beef tea and milk were also taken freely. Stimulation was kept up for five days, during which period the patient was not allowed to sleep more than one hour at a time, as she seemed to lose strength if a longer interval elapsed without taking food. At the end of this time she was convalescent. Nothing abnormal was found, upon auscultating the heart, and the patient was perfectly healthy in other respects.

Dr. Fifield spoke of the frequency with which such cases of shock occurred, although the subject was one which had been little spoken of. In a case of his own, he performed craniotomy in the woman's second confinement; in the third, he turned, but had to open the occiput before delivering; there was severe peritonitis, from which the woman recovered. In the fourth labor, Dr. F. turned as soon as the os was dilated. Having completed delivery, the uterus being well contracted, and the pulse and general condition good, he left the patient; but on returning after two hours he found her dying. There was no hæmorrhage, external or internal, yet she died in half an hour.

The method of *turning by one or two fingers* had long been advocated by Dr. Robert Lee; Barnes does not give him sufficient credit for this. Dr. Fifield said that he himself had twice used the bipolar method of turning, with perfect success.

Distention of the Bladder an indirect cause of Hæmorrhage.—When this organ is full, Dr. F. remarked, the uterus will not contract normally. When there is any bleeding from the womb after delivery, he usually finds advantage in passing a catheter. As an instance of this he mentioned a case of twin-birth, where, after delivery, the uterus kept alternately contracting and dilating; the woman lost much blood and became faint. The uterus reached as high as the navel. There was a singular tumor in the right groin. It was said that she had passed water freely; but the catheter was introduced and two or three quarts of urine were drawn, upon which the uterus contracted immediately. The observation was original upon the part of Dr. F., but he subsequently found that Earle had published the same fact.

Dr. Buckingham finds that the quantity of urine after rapid labor, is small; but when labor is severe and protracted, the quantity is usually large.

Dr. Fifield mentioned a case where he was sent for to perform craniotomy. He drew off a large quantity of urine from the bladder of the patient, whereupon the uterus immediately contracted, and the head passed with ease in ten minutes. In another case, complicated by a large abscess in one labium, the forceps was used, the placenta was adherent and had to be removed, and the consequent hæmorrhage was tremendous. The use of the catheter seemed to aid the contraction of the uterus.

The amount of urine present is sometimes very small. In an ordinary case of rapid labor, if *sure* that it had been recently voided, he might not insist upon catheterization; but as an almost invariable rule, he passes the instrument after delivery.

Dr. Buckingham suggested that the quantity of urine might perhaps be greater when ether had been inhaled.

Dr. Minot reported the favorable termination of the case of placenta prævia, of which he had spoken at the previous meeting. There was no profuse hæmorrhage. On the 15th of June, the head was found presenting, and the placenta partly floating on the right margin of the os. Dr. Putnam was called in consultation. A good dose of ergot was given, the membranes were ruptured, and forceps applied. The mother and child did well.

Dr. Curtis spoke of a girl at the Massachusetts General Hospital, who, two years ago, when only 13 years old, bore a child. She menstruated at twelve.

Dr. Abbot mentioned the case that occurred at the Monson Alms-house a few years ago; the mother was eleven years old, and the father sixteen.

STATE MEDICAL SOCIETY OF CALIFORNIA.

Our brethren in California, being desirous of resuscitating and placing on a firm footing the old State Medical Society, met recently in San Francisco and took measures to carry out their object. A permanent organization was formed, Constitution and By-laws adopted, and the following board of officers elected :—

President—Dr. T. M. Logan, Sacramento. 1*st Vice-President*—Dr. Harris, San Francisco. 2*d Vice-President*—Dr. Pinkerton, Oakland. 3*d Vice-President*—Dr. Ord, Santa Barbara. 4*th Vice-President*—Dr. Shurtleff, Stockton. 5*th Vice-President*—Dr. Hoffman, San Diego. *Corresponding Secretary*—Dr. G. Hewston, San Francisco. *Recording Secretaries*—Dr. H. Gibbons, Jr., San Francisco, and Dr. Nixon, Sacramento. *Treasurer*—Dr. A. B. Stout, San Francisco. *Censors*—Drs. Hatch, Simmons and Nixon, Sacramento ; Dr. Soule, San Francisco ; Dr. Simpson, Grass Valley ; Dr. Hayes, Los Angelos, and Dr. L. Robinson, Santa Clara.

At an adjourned meeting the following resolution was offered—" That all persons of either sex possessed of the qualifications prescribed by the Constitution be allowed to become members of this Society." A motion was made to refer the whole subject to a committee of five, to report at the annual meeting. This caused some discussion, and finally the matter was tabled indefinitely.

The following preamble and series of resolutions in relation to Medical Rank in the Navy, were then introduced, and, after a speech by Dr. Babcock, lately of the United States Navy, unanimously approved and adopted by the body :

Whereas, Of late repeated and persistent insults have been offered our professional brethren in the United States Navy, by the authority of the Navy Department, degrading them in rank and position ; lessening by example the respect due their profession and contracting their sphere of usefulness ; and,

Whereas, In every civilized community throughout the world, save in our Navy, the profession of medicine is considered, at least, equal in dignity and respectability to any other profession : and,

Whereas, In our service the members of the Medical Staff are selected by competitive examination from among the graduates of our medical schools, while the line officers are selected to be educated at the country's expense from among the uneducated boys of the community, by favoritism, by relationship, or, as has lately been proven, by purchase ; and

Whereas, Rank and command are distinct ideas, having no necessary connection ; there being a recognized necessity for *one* commander in all military operations, to whom the other officers are subordinate for the time being ; and

Whereas, If physical courage and personal exposure are the only tests of merit, no corps can show, during the late war, for example, a larger proportion of killed by the enemy, by fire, by water, or by the more deadly and insidious foe—disease, than the medical officers of the Navy ; therefore be it

Resolved, That we consider the stigma to which they have been subjected as applying to the profession at large, and while it is unremoved we consider that no young medical man having a proper regard to his self-respect, can accept an appointment in the medical corps of the Navy and subject himself and his profession to the indignities which the self-constituted and newly born " Aristocracy of the Line " impose.

Resolved, That we view with pain and sympathy the position of the senior officers of the Medical Corps, whose long service now renders it impossible for them to resign and commence life anew ; and we call upon our Senators and Representatives in Congress to recognize their position as co-equal with the highest in the service, by giving them military rank, such as is justly enjoyed by the Medical Staff of the Army, and by that in the services of each of the civilized nations of the world, together with such increased emoluments and promotions as will recognize their invaluable services to our country, and recompense them for the insults and oppression to which they have most unjustly been subjected.

Resolved, That a copy of these resolutions be sent to each Senator and Representative from this State, and that our delegates to the National Medical Association be instructed to bring this subject before that body for its action.

CULTIVATION OF CINCHONA IN INDIA.—The cinchona tree is successfully produced in Madras and Bengal. The number of plants at Darjeeling, on an area of 900 acres, exceeds 3,000,000, the increase during the past year being 676,654. The tallest plants were 19 feet high.—*Medical Record*,

Selected Papers.

ON FAILURE OF VISION, FROM DISEASE OF THE RETINA, AS A SYMPTOM OF BRIGHT'S DISEASE.

By John Green, M.D., Professor of Ophthalmology in the St. Louis College of Physicians and Surgeons.

It was observed by Dr. Addison, more than thirty years ago (*Guy's Hospital Reports*, vol. iv., 1839), that the grave cerebral troubles which arise in the course of Bright's disease are often preceded by nervous symptoms, among which he mentions headache, giddiness, and dulness of sight.

Ten years later, Prof. Landouzy, of Rheims (*Gazette Médicale* and *Annales d'Oculistique*, 1849), called attention to the very frequent coëxistence of amblyopia with Bright's disease, but it was vaguely referred to a cerebral origin, and classed among the nervous derangements incident to the progress of the malady.

In 1850, Türk, of Vienna, described certain changes in the minute structure of the retina in a subject who had died of Bright's disease, thus throwing the first light upon the pathology of the affection of the eye (*Zeitschr. der k. k. Ges. der Aerzte zu Wien*, 1850, No. 4, quoted from Arlt).

The discovery of the ophthalmoscope by Helmholtz, in 1851, followed almost immediately by its employment in the examination of the eye in disease, provided the means of studying the diseases of the choroid and retina in the living subject, and led to the speedy recognition, by many observers, of the pathological changes which had been demonstrated anatomically by Türk.

The morbid changes in the retina, as they appear when seen by the aid of the ophthalmoscope, have been admirably depicted by Liebreich (*Atlas d'Ophthalmoscopie*, Paris, 1863). An excellent description of the retinal changes, and a tolerable copy of one of Liebreich's plates, are contained in Mr. Soelberg Wells's late work "On Diseases of the Eye" (London, 1869), a book which is now readily accessible to American physicians, and to which, therefore, I would refer for a detailed account of the anatomical lesion and ophthalmoscopical appearances. My present object is to call attention to the fact that failure of vision may be the first symptom to attract the serious attention of the patient and his physician, and that, in such cases, the ophthalmoscopic examination of the eye may reveal changes in that organ, so conspicuous as to demand instant recognition, and so characteristic as to constitute a symptom of confirmed renal disease at least as conclusive as the detection of albumen in the urine.

In illustration of this point I have briefly to report four cases of Bright's disease in which the changes in the retina, as revealed by ophthalmoscopic examination, first aroused the suspicion of renal trouble.

Case I.—Dr. S., about 35 years of age, consulted me early in the autumn of 1866, on account of a very decided dimness of vision, which had been gradually increasing since he had first noticed it, a month or so before. He appeared much depressed in spirits, and was evidently in bad health, suffering from occasional severe attacks of pain in the back of the head, and having had several attacks of an epileptiform character. His extreme nervousness made it difficult to obtain any very satisfactory history of his case, nor could the friend who accompanied him give me much information.

The attempt to read revealed the fact that only large type (pica) could be distinguished, and that slowly and with difficulty. Examination by the test letters of Snellen showed that the acuteness of vision, as expressed according to this method, had become reduced to one-fifth or one-sixth of the normal. The pupils were quite small, and my proposal to dilate them by atropia was declined through fear of possible temporary interference with the patient's professional work.

The ophthalmoscopic examination, made under this disadvantage, revealed marked deposit of white glistening exudation around the disc of the optic nerve, obscuring its outline; there was also decided swelling of the disc, with some extravasation of blood in the form of streaks radiating from the point of entrance of the central artery and vein. The region of the macula lutea could not be examined, in the contracted state of the pupils, owing to the strong reflection of light from the cornea, but the extent of the retinal surface occupied by the exudation was so great as to favor the diagnosis of *retinitis nephritica*, rather than double *neuritis* from intracranial pressure obstructing the return of blood through the ophthalmic veins.

The very serious nature of the case was explained to a professional friend of the patient, and at my request an examination was made of the urine, which revealed the presence of albumen in large quantity.

Dr. S. failed rapidly in health almost from this time; anasarca soon followed, and he died about four months after I first saw him. I was subsequently informed by an intimate friend of the patient that his sight became much worse a few weeks after I saw him, and that it afterwards improved, so that shortly before his death he could read common print with ease, an occurrence perfectly in accord with many clinical observations supported by accurate ophthalmoscopical studies.

Case 2.—J. H. McN., 40 years of age, residing in Crittenden Co., Arkansas, consulted me February 26th, 1868, in company with his physician, who had come with him to St. Louis. He was in rather feeble health and had been seen in consultation, with his physician, by two eminent practitioners of this city. Albuminuria was not suspected. The patient was referred to me for investigation of a recent failure of sight. The right eye had been lost as an organ of vision several years before, from an inflammatory attack of which he could give no intelligible history; this eye had, however, been recently inflamed for a second time, and it had been thought that the present failure of sight in the left eye might possibly be of sympathetic origin.

Vision was found to be reduced to about one-fiftieth of the normal, as expressed by Snellen's method by the use of test letters, and the ophthalmoscope revealed the characteristic picture of nephritic retinitis. The changes were especially marked in the region of the macula lutea.

A chemical examination of the urine was made on the spot; the quantity of albumen was so large as to form a firm jelly on the application of heat.

The further history of this patient is not positively known.

Case 3.—C. A. M., 25 years of age, had been near-sighted for many years (M= 1–9). His vision was nearly normal as measured by the power of distinguishing letters, but he had lately noticed an appearance as of a cloud before one of his eyes, which he attributed to over-work at his profession as a draughtsman. His very intelligent medical adviser suspected subretinal effusion as a consequence of the myopia, and referred the case to me for examination. The ophthalmoscope revealed the same retinal lesions as in the former case; the exudation being quite conspicuous in both eyes, but chiefly in the region of the disc of the optic nerve. The urine proved to be highly albuminous, but contained very few casts. Those observed were of the granular and large waxy varieties. * * * * Mr. M. died in the summer of 1869, about six months after the first detection of the nature of his disease.

Case 4.—Dr. C., about 55 years of age, an eminent physician of this State, consulted me August 4th, 1869, in company with one of the first physicians of this city, on account of failing sight. He could still see well enough to go about, but found it very difficult to read even in a strong light. He was not aware of any especial disease, although he considered himself as somewhat worn by the fatigues of practice and the heat of summer. The symptoms referable to the eyes were suggestive of cataract, and he was prepared for this diagnosis. The ophthalmoscope, however, showed that all the media of the eye were perfectly transparent, and that the defect in vision was the consequence of advanced retinal lesion in both eyes.

The diagnosis of albuminuria was communicated to the consulting physician, and was immediately confirmed by a chemical examination of the urine. The albumen was so abundant as to render the contents of the test-tube almost solid when heated.

I have received information that Dr. C. died three months after I saw him in consultation.

The four cases now reported sufficiently illustrate the most important features of the amblyopia of Bright's disease. The one constant subjective symptom is failure of vision, which may be so slight as scarcely to attract notice, or so great as to incapacitate the patient from guiding himself. This may appear at any stage of the disease, and may increase and diminish or even almost entirely disappear after having reached nearly total blindness, while the fatal malady is steadily marching onward to its inevitable termination. It is absolutely painless in all its stages, and is marked by no external sign of inflammation. Occasionally, as in case 4, in an elderly person with otherwise normal eyes it is very liable to be mistaken for incipient cataract, on account of the general similarity of the subjective signs in the two affections. In case 1, the coexistence of serious head symptoms naturally suggested the diagnosis of amaurosis from cerebral disease. Cases 2 and 3 seemed to point to local lesions of the eye, in the one instance to commencing sympathetic ophthalmitis, and in the other to choroidal and retinal changes dependent on the distention of the eye-ball incident to progressive myopia.

The diagnosis of albuminuric retinitis by the ophthalmoscope is usually a matter of great simplicity. The principal source of possible mistake lies in the close resemblance which some cases of this disease bear to infiltration of the disc of the optic nerve and the retina immediately around it, occurring simultaneously in both eyes from obstructed venous circulation dependent on intracranial pressure from effusion, &c. Very recently, too, a case has been most carefully studied and reported by Dr. H. D. Noyes, of New York, in which the ophthalmoscopic appearances were absolutely identical with those which belong to albuminuric retinitis, but in which the disease was unmistakably not Bright's disease, but *diabetes.* This case, taken in connection with the microscopical investigation of the retinal changes in a case of diabetes observed by Treitz and reported by Arlt, leaves scarcely a doubt of the identity of the retinal affection, and goes far, therefore, to confirm the few earlier but somewhat defective reports of retinitis associated with glycosuria.—*Saint Louis Medical and Surgical Journal.*

Medical and Surgical Journal.

Boston: Thursday, November 17, 1870.

The length of the leading article for this week obliges us again to resign our Editorial space.

"MEDICO-LEGAL BEARINGS OF CHLOROFORM."

Through recent numbers of the London *Medical Times and Gazette*, the profession has been apprised of a coroner's verdict at Yokohama in the case of a death from chloroform—a verdict which the practitioners of Shanghai received "with astonishment and consternation." The administration was resorted to in a case of dislocation of the shoulder, and resulted in death before the reduction was attempted. It is the old story of "a spasm and cessation of the heart's action," failure of "restoratives," and death. The verdict returned was "death from the effects of chloroform administered without proper degree of care," which, says the *Times*, "is in fact a verdict of manslaughter, and the surgeon who administered the chloroform has been committed for trial, but liberated on bail in the sum of five thousand dollars."

Thus the public in that distant country have taken the initiatory steps to protect themselves from what has been mildly termed "unncessary hazard." We feel for the unhappy practitioner, who has thus fallen a victim to his countrymen's foolhardiness; and we hope that he will be acquitted, though we cannot agree with the *Times* that no blame fairly attaches to him. No instance is known of a death caused by sulphuric ether under similar circumstances, while nearly four hundred of those recorded killed by chloroform "were in rude health" (Kidd); and "a death from chloroform," says Bennett, "is one of the most dreadful things that can occur." "Chloroform kills because it does kill," says Richardson. "If it kills, it is because it is in its nature a poison," says Petrequin. Why then should not a practitioner be held responsible for administering a lethific agent when its administration is an *unnecessary* hazard, and when, too, according to the *Times* itself, a fatal result is "an *accident* which is *by no means very uncommon*, which has *happened to the most experienced surgeons and 'chloroformists,'* and which *no skill* and *no precautionary measures could prevent.*"

The italics in the preceding sentence are ours, and are intended to fix the attention of the reader upon the apparently unconscious admission of the *Times* of the truth of the principal alleged objections to the use of chloroform for anæsthetic purposes. While admitting thus much how can the *Times* with any reason exclaim that "it is monstrous that a Medical Practitioner should be put upon his trial because he is the subject of an accident" such as this? We hope the "consternation" will reach the united kingdom and convince medical men there that there is danger to the practitioner as well as to the patient in the unnecessary administration of chloroform for anæsthetic purposes. And let those on this side of the water heed the lesson.

Medicus.

Our English and Irish Exchanges come to us this week in a state so nearly approaching disorganization, that we are led to investigate the cause. We find that the retaining thread which has hitherto bound together the various sheets of the foreign periodicals has been cut by an absurd order from the British Postal Department, a species of red tapeism which is, to say the least, a matter of inconvenience to the readers of the Journals. In future all stitched periodicals are excluded from the mail rates provided for newspapers, and our cotemporaries are forced to incommode their patrons or else subject them to an exorbitant postage rate.

Medical Miscellany.

Convention of Volunteer Surgeons.—Surgeons of Volunteers, Regimental Surgeons and Assistant Surgeons, A. A. Surgeons, &c., who served in the Army of the United States, during the late war, are requested to convene in the City of Washington, D. C., on Thursday, 15th December next, at 12, M., for the purpose of completing the organization of the National Society of Volunteer Surgeons.

Chris. C. Cox, M.D., *President.*
T. B. Wood, M.D., *Secretary.*

Myelitis.—Dr. Oxley, of Liverpool, mentions a case of Idiopathic Myelitis, in which the patient, a boy of eleven, had pains commencing in the small of the back round to the umbilicus. The pains were worse at night. Micturition frequent; walking gave great pain; pulse 120; bowels costive; skin red over lower dorsal vertebræ. Priapism, and incontinence of urine was followed by paraplegia and anæsthesia extending to seventh intercostal space. Bedsores over sacrum and trochanters. On *post-mortem* examination, inflammatory lymph extending over lower portion of spinal cord was found. Nothing abnormal was observed, on laying open membranes, but a longitudinal incision of the cord showed white softening for half an inch, opposite fifth dorsal vertebra, and on section, whitish fluid exuded. The bladder, firmly contracted, had an abscess at its upper part. Ureters much dilated, and pelvis of kidney enlarged and ulcerated. This is a very interesting case.—*Dublin Med. Press and Circular.*

Prussian Military Punishments.—The mistaken persons in our own country who cannot distinguish philanthropy from maudlin sympathy with culprits who are submitted to the punishments set down by the law, will, perhaps, think better of the mild discipline to which English prisoners are subjected, when they compare their treatment with that to which soldiers are submitted in the Prussian army. It appears that, in time of peace, severe arrest consists of confinement in black darkness, with the ground for a bed. Bread and water is the fare in each case. It cannot be ordered for more than five weeks, it being reckoned that longer confinement of the kind is calculated to undermine the constitution. Severe arrest is impracticable in war time in the enemy's country. For it is substituted the punishment of "tying to a tree." Two hours on the tree is reckoned equivalent to twenty-four hours' severe arrest, and the maximum of this punishment is also four days. The punishment undoubtedly is severe. The prisoner is tied round the tree by the arms, by the waist, and by the feet, so as to be unable to touch the ground as a support; and his face is turned to the tree that he might see nothing.—*Ibid.*

We hope none of the residents of our sister city will be driven from their homes by the item of news (?) reported by our Dublin cotemporary that "yellow fever prevails in New York."

Injected Placentæ.—Dr. Jas. T. Whittaker, Cin., Ohio (*Am. Journal of Obstetrics*), in his voluminous prize essay on "The Morbid Anatomy of the Placenta," states that the museum of Prof. Hyrtl, of Vienna, contains the most wonderful collection of injected placentæ—over 200 specimens.—*Med. Record.*

Notice.—The attention of subscribers is requested to the bills which they have lately received, or will soon receive, in their copies of the Journal. To those out of the city the mail furnishes generally the best mode of remittance. When any large amount is to be thus remitted, either drafts or post-office orders should be made use of. Receipts will be returned to subscribers in the No. issued next after receiving the money. When not so received, notice to the publishers should be immediately given. Notice is also requested of mistakes of any kind, both in and out of the city, which may occur in consequence of the change which has taken place in the clerkship of the Journal business matters. The publishers are compelled to place in the hands of an attorney, for collection, quite a number of unsettled accounts which are found in the Journal books.

Pamphlets Received.—A Sketch of the Early History of Practical Anatomy. Introductory Address to the Course of Lectures on Anatomy at the Philadelphia School of Anatomy, Tuesday, Oct. 11, 1870. By Wm. W. Keen, M.D., Lecturer on Anatomy and Operative Surgery, &c. Pp. 31.—Prescription and Clinic Record. Sixth Edition. New York: Wm. Wood & Co.—The Physician's Visiting List for 1871. Philadelphia: Lindsay & Blakiston.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending Nov. 12, 1870.

Cities and towns.	Total.	Prevalent Diseases. Consumption.	Pneumonia.	Typhoid Fever.
Boston . . .	104	17	11	6
Charlestown	10	3	1	0
Worcester .	16	1	0	0
Lowell . . .	13	1	0	1
Milford . . .	2	1	0	0
Chelsea . . .	2	0	0	0
Cambridge .	15	1	1	1
Salem	11	3	1	0
Lawrence . .	16	6	2	3
Springfield .	9	3	0	1
Lynn	8	1	0	1
Fitchburg . .	3	0	0	0
Taunton . .	9	2	0	1
Newburyport	6	2	0	0
Somerville . .	8	1	0	3
Fall River .	14	3	2	1
Holyoke. . .	13	2	1	0
	259	47	19	18

Holyoke reports one death from smallpox. From all the above-named places there are reported eleven deaths from croup and diphtheria, and nine from scarlet fever.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Nov. 12th, 104. Males, 54; females, 50. Accident, 5—apoplexy, 7—bronchitis, 1—inflammation of the brain, 1—disease of the brain, 1—cancer, 2—consumption, 18—convulsions, 6—croup, 2—debility, 2—diarrhœa, 3—diphtheria, 2—dropsy 2—exhaustion, 1—scarlet fever, 2—typhoid fever, 6—fever, 1—disease of heart, 6—hæmorrhage, 1—intemperance, 1—jaundice, 1—disease of the kidneys, 2—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 9—marasmus, 2—old age, 4—ovarian disease, 1—paralysis, 2—peritonitis, 1—puerperal disease, 1—rheumatism, 1—suicide, 1—syphilis, 1—unknown, 3.

Under 5 years of age, 25—between 5 and 20 years, 8—between 20 and 40 years, 29—between 40 and 60 years, 22—above 60 years, 20. Born in the United States, 61—Ireland, 29—other places, 14.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

MINNESOTA AS A RESORT IN PULMONARY AFFECTIONS.

By B. F. D. Adams, M.D., Waltham.

Minnesota occupies nearly the geographical centre of the North American continent, lying midway between the Atlantic and Pacific Oceans, Hudson's Bay and the Gulf of Mexico.

The State embraces an area of about 84,000 square miles, a territory much greater in extent than that of all the New England States combined.

The general surface of the country is undulating, having its greatest depression at the junction of the Mississippi and Minnesota rivers, in the immediate vicinity of St. Paul, and from this point, 850 feet above the level of the sea, it gradually rises, on the south, to a general average of 1000 feet near the Iowa line, and on the north, to the highlands of Minnesota. These highlands, some 1600 or 1700 feet above tide water, form the summit of the great watershed of the continent, sending its waters northward through the Red river to Hudson's Bay, eastward through the Great Lakes and the St. Lawrence to the Atlantic, and southward through the Mississippi to the Gulf.

The climate of Minnesota and of a vast region lying to the northwest of it, is peculiar, differing widely from that of any other part of the country. Perhaps its most striking characteristic is the great difference in the mean temperature of the summer and winter months, that of summer being, at St. Paul, as high as 70°6, while that of winter is but 16°1.

This is forcibly illustrated by a comparison with eastern points. In St. Paul the average temperature for the whole year, as drawn from the records of Fort Snelling, five miles from the city, is 44°5. This coincides nearly with that of northern New York, northern Vermont, central New Hampshire, and southern Maine. Its spring temperature 45°6 is the same as that of central New York and southern Connecticut. Its summer average of 70°6 finds its equivalent in central Pennsylvania, New Jersey and New York city. Its autumn temperature 45°9 is that of northern New York, while its equivalent in winter 16°1 is only to be found in the northern extremity of Maine. Thus we find the summers of central Pennsylvania and New Jersey succeeding the cold of our most northern New England winter.

There is a similar and equally marked contrast of winter and summer extremes in the amount of rainfall of this region.

This is shown in the following table taken from the report of the Commissioner of Statistics for 1860–61, in which the mean temperature and rainfall of each succeeding month is placed side by side.

	Winter.			Spring.			Summer.			Autumn.		
	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.
Mean temperature.	16°9	13°7	17°6	31°4	46°3	59°	68°4	73°4	70°1	58°9	47°1	31°7
Rain—inches.	0·7	0·7	0·5	1·3	2·1	3·2	3·6	4·1	3·2	3·3	1·4	1·3

This synopsis shows one or two curious facts—The small amount of rainfall in winter (it being understood that snow is measured as rain in the proportion of 12 to 1), its evenness of distribution through the three months as compared with the evenness of temperature, the abrupt transition from winter to spring, with the corresponding increase of rainfall, and the rapid rise of heat and moisture from this point, culminating at midsummer, and then declining through the same regular gradations.

In the absence of any accurate hygrometrical records, we get from this table the best indication I can give of another prominent peculiarity of the Minnesota climate, the great dryness of the atmosphere during the colder months.

Owing to the uniformly low temperature of winter, thaws to any extent seldom occur, and rain very rarely falls, so that the ground generally remains covered from the first snowfall to the final thaw.

Remembering the difference in the conducting powers of dry and moist air, the effect of this uniform dryness in mitigating the severity of the cold will be seen at once. With the slight rainfall, too, comes the long succession of bright, sunny days, which form the especial charm of these winters, and are of such inestimable value to the invalid seeking an out-door life.

To this dryness of the atmosphere, more than to anything else, Minnesota owes its deserved reputation as a resort in pulmonary affections.

The moisture of the summer months, however, as marked by the rainfall, is quite equal to that of our New England States, and as the heat is much greater, it is not generally wise to send patients there before the early autumn. We can find on the higher table lands of our New Hampshire hills, or on the western slope of the Green Mountains, a much better summer climate.

The problem of a choice of climate for our phthisical patients is often an extremely difficult one, our decision being guided as much by questions not strictly medical, and by the constitutional idiosyncrasies of the individual, as by the actual pathological condition developed by the stethoscope. There is no specific influence in any climate, but, with certain exceptions, the cold and dry, such as we have in its greatest perfection in Minnesota, usually produces the best results, mainly because under its influence digestion and nutrition are most likely to improve, provided only the patient has sufficient vitality to thoroughly react from exposure to cold.

In those cases of phthisis, however, in which acute inflammatory symptoms are of frequent occurrence, or in which bronchitis exists largely out of proportion to the amount of local lesion, the dry, bracing quality of the air is too stimulating, and seems to act as a decided irritant.

In a letter recently received from my friend Dr. Flagg, of St. Paul, a gentleman in whose judgment and accuracy I have the greatest confidence, and whose opportunities for observation during a practice there of several years have been very considerable, he has expressed so well and concisely, opinions which my experience during a two years' residence in Minnesota entirely confirm, that I cannot resist quoting largely from it, though it was not intended for publication. He says:

"The class of phthisical patients most likely to be benefited by the climate of the Northwest, is the purely tuberculous, those in whom cachectic symptoms are early noticeable, and in whom the lesion of the lungs originates in tuberculous diathesis, rather than in some one of the inflammatory processes sketched by Virchow, Niemeyer and other of the German pathologists. * * * * Tuberculosis being dependent on a constitutional cause, and being a disease of nutrition, is likely to be benefited by the increased energy of circulation and cutaneous function, and the improved assimilation effected by residing in a cold dry climate, as this is, compared with more southern and eastern parts of the country. I am inclined to ascribe pretty much all the benefit I have seen obtained here to improved assimilation, which my observation of patients under my charge convinces me does take place. Of course something is due to change of habits, to the effect of new scenes and society, and to rest from business, and should be placed to the credit of travel as much as to any special effect of climate.

"The pre-tubercular stage as described by E. Smith, of Brompton Hospital, indicates the class which is best suited to Minnesota. Persons of what is described as lymphatic temperament, and those in whom hæmoptysis has been an early and prominent symptom, are especially adapted to this climate, also those vaguely, yet perhaps expressively described as 'relaxed,' showing want of 'tone' of mucous surfaces. Those in advanced stages of phthisis should not expect benefit, and often derive positive harm. The existence of a cavity of any extent, with pus producing surface, should prevent a patient coming here.

"The amount of lung consolidated is not an objection, unless the health is proportionately impaired. I cannot be too plain in advising that patients in whose lungs there is a large deposit of tubercle rapidly undergoing softening, should not be sent. The existence of small cavities, the morbid process being quiescent, is not an objection. It is rather the active inflammatory process consecutive to deposit and softening of tubercle, that is more likely to receive harm than good. Those who are subject to intercurrent attacks of bronchitis, or who suffer from a sense of 'constriction,' to use a patient's term, during cold, dry winds, are not very suitable cases.

"There is a distinction between bronchial complications. Those who have deficient expectoration (bronchial), that loud, dry, ringing cough, dry ronchi, and who readily develope an acute attack, with considerable fever, or perhaps nervous symptoms, are not likely to improve in this climate. On the contrary, those who have congested mucous membranes, the throat perhaps looking sodden, *not* red, fiery and dry, a good deal of morning expectoration, and perhaps a sluggish circulation, will generally do well.

"In short, those who are markedly prone to local inflammatory attacks are not very suitable cases to send in winter. They do pretty well in the summer, but what I have written applies more especially to the winter, that being the season selected by invalids, our summers not differing sufficiently from the eastern climate to offer any inducement for exile.

"Other forms of phthisis, those in which the disease is chronic pneumonia, the unabsorbed pneumonic deposit of Andrew Clark, the lung lesions following acute pleurisy and pneumonia, do well or otherwise as the general health is markedly disordered or not.

"Of course in such cases one of the principal objects of treatment is to maintain the general health, and in many cases I have seen nutrition and circulation improve and corresponding improvement in local lesions, yet as a rule I think such cases do better in a warm and dry climate."

I have nothing to add to this admirable summary of Dr. Flagg's.

We see Minnesota is not the sanitary Utopia, which some of its friends would have us believe, though for a certain class of cases perhaps no place presents equal advantages. I need not remind the profession of the large number of diseases other than phthisis in which we may expect improvement under the influence of so bracing and tonic an atmosphere. All who have experienced the new life and vigor which our clear cold northwest winds bring with them, can appreciate the effect of the Minnesota climate on those who can resist the severity of its winters.

It remains to speak of a few things of interest to those about to remove to the west. Agriculture is of course the chief industry of the State, but labor of any kind, particularly skilled labor, will usually command a market. The professions, as in the west generally, are over-crowded, and those seeking employment in the mercantile houses of the larger cities might at first experience some difficulty in finding it, unless they commanded capital.

The hotels and boarding-houses of the two principal places, St. Paul and Minneapolis, are better than we should find in towns of the same size in the East, though they do not compare favorably with the larger houses of New York or Boston.

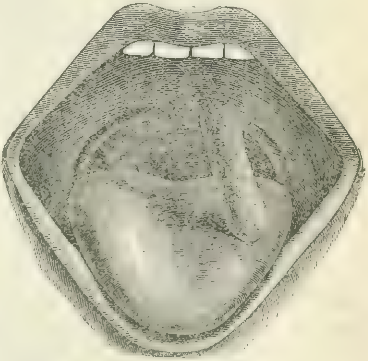
The price of board is about the same there as here, for the same accommodations. The markets are excellent, being constantly supplied with a variety of game, besides all the ordinary meats of very good quality. The price of all provisions, except those brought from the East, is very much less than with us, considerably reducing the cost of housekeeping.

NASO-PHARYNGEAL POLYPUS REMOVED THROUGH THE MOUTH BY A MODIFIED ECRASEUR.

By Ephraim Cutter, M.D. Read before the Suffolk District Medical Society, Sept. 24th, 1870.

In October, 1869, the mother of M. T., æt. 15 years, consulted me in relation to her daughter's eyes. According to the best of my judgment, there existed severe corneitis and conjunctivitis. I sent her to the City Hospital, where she came under the care of Dr. Williams. Afterwards, the mother stated that the eyes were not much improved, and desired me to look into her daughter's throat to see why she made so much noise with her breathing at night.

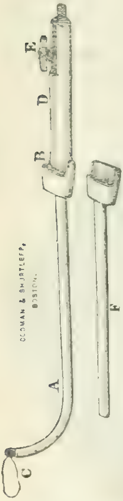
Fig. 1.



The girl was overgrown, with a stooping posture, a stolid look of countenance, open mouth and thick lips. There was an entire absence of the vigorous, intelligent and active look of a girl of similar age. On looking into the mouth and depressing the tongue, I saw a fleshy mass behind the soft palate, entirely filling the space between the pillars and reaching down to the level of the tongue. Whilst I was looking, the patient gagged several times, when suddenly from beneath the left pillar of the soft palate a cylindrical polypus protruded and reached two thirds the length of the tongue. It resembled a boy's penis in a state of erection. Vide Fig. 1.

The polypi evidently were pedunculated and attached somewhere in the naso-pharyngeal space. The problem was to remove them, cutting their base *in situ naturali*, without disturbing the normal tissues. The operation was performed, Nov. 11th, 1869, in the presence of several physicians, thus:—A No. 12 annealed iron wire, three feet long, was bent double. The two ends were given one to one assistant, the other to another, with instructions not to allow any twisting. The loop was slightly bent downwards, and then passed through over the floor of the right nostril (which had been found more pervious than its fellow) into the mouth. It was then drawn forwards in front of the tumors, the loop expanded and then pushed backwards behind the growths. Traction was made by the assistants on the free ends of the wire, and then a flattened brass tube (Fig. 2), 6 inches long, $\frac{3}{16}$ of an inch wide, $\frac{1}{16}$ of an inch thick, inside measure, was slipped over the two wires through the nose down on to the tumors. The flat sides of the tube were vertical. The proximal end of the tube was provided with a brass thimble, soldered on to the end in such a manner as that the tube rested against the thimble, and the opening of the tube corresponded with a similar one in the thimble. It was only necessary to slip the wedge-shape extremity of the écraseur into the thimble and fasten the wire to the nut, and all was ready for the section. This was accomplished by turning the screw as usual. The large growth was easily cut off. The assistant who held it through the mouth lost his hold, and it was swallowed! It remained to cut off the cylindrical polyp. This was done through the mouth as follows. A brass tube, similar to that just described, was bent up at the distal end to a curve of a quarter of a circle. (Fig. 2.) The wire, well greased with lard, was run through, leaving a loop large enough to slip over the growth. This loop was bent outwards to a right angle with the end of the écraseur tube. The tube was attached to the écraseur and the wire fastened as before. The loop was passed over the polyp up behind the soft palate, until the horizontal portion of the tube rested against the under edge of the soft palate. Traction was made upon the growth, and a few turns of the screw cut it off. This was not swallowed.

Fig. 2.



A marked improvement followed; the breathing was free, and the inflamed eyes got well very soon, showing a seeming connection with the presence of the growths.

In June, 1870, I discovered that the larger growth had returned, although its removal had been accomplished by a transverse section through its substance, the écraseur wire cutting in the direction of the long axis of the écraseur. Still, as the growth had a higher origin than opposite the floor of the nostril, it was evident that the section was not made high enough. Moreover, it was also plain that no higher cut could be made through the nose. Remarking that the smaller growth had not returned, and that although the loop was bent to a right angle over the end of the écraseur, still the section was accomplished more thoroughly, I proceeded to remove the recurred growth July 14th, 1870, through the mouth, and speedily accomplished it in the same manner as the smaller growth at the first operation, except that after having passed the loop over, I seized the growth with my left thumb and finger, drawing it down and raising the écraseur up. Thus the section was made as close as possible to the origin. Indeed, the rhinoscope afterwards showed the seat of insertion to be on the median line of the post-pharyngeal wall, well up towards the dome. It was cleanly cut off, as with a knife. It was touched with stick nitrate of silver, and has not returned. At the present time the patient is doing well.

Remarks.—This modification of écraseur can be adapted to the larger forms of instruments. It may be soldered to a nut which may screw into the shaft of the instrument. The main features of it are simplicity, minimum amount of material, and strength. When operations are conducted in cavities of limited size, it is necessary to have the instruments as much smaller than the cavity as is possible and yet strong; if the cavity cannot be enlarged, the instrument must be diminished. In the case of the common nasal polypi I have found this modification work well and painlessly. By using the curved instrument, the operator can see to pass the loop up under the growth, while an assistant cuts it off. In relation to strength, the instrument stood a severe test in a case of intra-uterine fibroid, an account of which will probably appear elsewhere. In this instance it was found, after an hour and a half hard work by one of the most accomplished of operators, impossible to surround the growth with a chain. However, the compact tube and wire were carried into the uterus, the loop spread and pushed up round the fibroid by the fingers and a blunt probe. The growth was cut off with no difficulty. A second cut was rendered necessary, by the same means, before a portion was removed. The remaining moities were extracted by forceps, very much as a child is delivered. The growths were dense and tough, yet the tube écraseur cut through them.

DEFECTS OF OCULAR REFRACTION, &c.

(Continued from page 310.)

LECTURE III. PART I.—*Three Principal States of Refraction and their Diagnosis.*

WE have seen that by the expression *refraction* of an eye is meant that state in which its refractive power is at a minimum, and in which it is adapted for its far-point; and in which also the accommodation is null (if we suppose that there is no negative accommodation, that is no muscular contraction causing a diminution of refractive power).

States of refraction have been divided into three principal classes, according to the position of the far-point.

1st. *Emmetropia*, in which the far-point corresponds to parallel rays and is at an infinite distance in front of the eye.

2d. *Myopia*, in which the far-point corresponds to diverging rays, and is at a finite distance in front of the eye.

3d. *Hypermetropia*, in which the far-point corresponds to rays already converging, and may be considered to be at a finite distance *behind* the eye.

It is also to be noticed that in emmetropia the principal focus or focus of parallel rays is at the retina; in myopia the focus of parallel rays is in front of the retina, so that diverging rays are required in order that their focus may be at the retina; and in hypermetropia the focus for parallel rays is behind the retina, so that rays already converging are required in order that their focus may be at the retina.

The difference in the far-point is thought to be generally due to a difference in the length of the eye, measured antero-posteriorly from near the middle of the cornea to the macula lutea, rather than to a difference in the refractive power of the system of cornea and lens, the myopic eye having been found longer than the emmetropic, and the hypermetropic shorter.

But in astigmatism, in which the refractive power is different in the same eye in different planes passing through the antero-posterior axis, this difference must lie in the refractive apparatus proper; and in such case the myopic meridian is stronger, more refractive than the emmetropic, because it requires more refractive power to bend diverging rays to a focus on the retina than to bend parallel rays to the same focus. Similarly, the hypermetropic meridian is weaker, less refractive than the emmetropic. Bearing in mind that a concave glass diminishes the refractive power, and that a convex increases it, it may be said that the strongest meridian in astigmatism requires less artificial *addition* to its refractive power than the weakest.

We may, also, even when comparing together different eyes, consider the myopic eye as relatively more refractive than the emmetropic; relatively to the object to be attained, the bringing of the rays from a point at a given distance in front of the respective eye to a focus on its retina, and looking to the strength of the glasses to be required for this purpose.

Supposing both eyes adapted for their respective far-points, an eye with myopia $\frac{1}{10}$ requires no glass to see at 10 inches, while an emmetropic eye to see at this distance would require a convex glass $\frac{1}{10}$; that is, is relatively weaker than the myopic eye by the amount of the myopia.

Also, in the same circumstances a hypermetropic eye would require a convex glass $\frac{1}{10}$ and in addition the glass to correct the hypermetropia; that is, is relatively weaker than the emmetropic by the amount of the hypermetropia.

It may be noticed that eyes not emmetropic are included under the term *ametropic*.

In investigating any case which presents itself for treatment, we must determine the far-point, because the presence of myopia, or of hypermetropia, would furnish important elements to be considered in the diagnosis and treatment. The far-point may be determined by trying the patient's vision with glasses, or by examining the eye with the ophthalmoscope. In using the former method it is to be remembered that the far-point corresponds to the minimum of refractive power.

Hence the rule, to find the strongest convex or weakest concave which gives the best vision for distant objects. The eye will then be reduced to its minimum of refractive power, because seeing through the glass of the most power (the glass and the eye together being just equal to the power required to bend parallel rays to a focus on the retina). The eye will then be adapted for the rays which emerge from the glass; this we know, because the vision is at its maximum. The point of origin of these rays is the far-point.

We thus learn that the eye, when reduced to its minimum of refractive power, is adapted for certain rays—those which emerge from the auxiliary lens, and from which the far-point is easily inferred. That the eye is so adapted appears from the fact that, with these rays entering it, vision is at its maximum.

To test the acuteness of vision we make use of letters of different sizes. We seek the strongest convex or weakest concave which gives the maximum of vision. Of several convex glasses giving equally good and the maximum vision, we select the strongest for the determination of the far-point; and of several concaves, the weakest.

In testing the vision with glasses to determine the far-point, the ocular media are supposed clear, otherwise irregular refraction may interfere with the definiteness of the result.

The accommodation is also supposed to be reduced to zero; this state is promoted by letting the patient look at *distant* test objects; also by trying successively stronger and stronger convex glasses till the strongest are found with which the maximum of vision is obtainable, or by trying weaker and weaker concave, till the weakest are found with which the maximum of vision is obtainable.

The accommodation might be paralyzed by applying the sulphate of atropia to the conjunctiva, but the result—the dazzling and inability to see near objects distinctly—inconveniences and often alarms the patient. It may also be mentioned that atropine has been thought by some or suspected to have induced attacks of glaucoma in eyes previously disposed to it.

Bearing in mind the above, suppose that an eye sees distant objects *better* with no glass than with any convex, and *as well* as with any concave; if the vision is proportional to the age of the patient (it being remembered that the acuteness of vision diminishes with years), the eye is then *emmetropic.* If the vision is less than normal to the age of the patient, we must look for some cause not remediable by spherical glasses, such as astigmatism or disease of the internal membranes, &c. Opacities of the media are supposed absent. For such investigation recourse must be had to the ophthalmoscope, by means of which we may also obtain independent information as regards the refraction.

Again, if the eye sees distant objects best through a convex lens, and if vision is normal, then the eye is hypermetropic. If vision is not normal, we must look as before for the cause. If the eye has sufficient accommodation to neutralize the hypermetropia, the vision with the convex may not measure more than without it; but if it measures as much, and if it is normal, we infer hypermetropia.

If an eye without opacities of the media, and with its accommodation inactive, sees distant objects *better* with a concave than without, myopia exists. Opacities of the media often exist together with myopia, in which cases, if the opacities do not prevent, we may determine the refraction by the ophthalmoscope. We shall see, later, that an eye *with opacities of the media* might see better in the distance with a concave and yet not be myopic.

We measure the vision by the smallest objects which the eye with perfect adjustment can see in the distance. These might be different for different eyes and for the same eye at different times. It is therefore desirable to have some standard objects with which to test the acuteness of vision.

It is found that an eye of normal visual acuteness can distinguish letters subtending a certain angle and separated by an interval of the same amount. The letters of Snellen, at the distances which designate them, subtend each an angle of 5 minutes, the separate strokes subtending in breadth an angle of 1 minute. By increasing the size of the letter proportionally to its distance from the eye, the retinal image will remain very nearly the same.

Snellen's letters marked C C are ten times as large as the X X. The letters are in size proportional to the distances designating them and at which a normal eye, accommodated for the respective distance, is able to see them distinctly. If D is the greatest distance at which a normal eye can see certain letters distinctly, and if another eye must approach nearer to the distance *d*, in order to see them distinctly, the vision of the latter eye is to unity as *d* is to D. Or, if an eye at twenty feet cannot see smaller letters than X L, then we may say roughly (supposing that it could not see the letters X L farther off than twenty feet), that its vision is to unity as 20 is to 40, that is, as the greatest distance at which it can see the letters is to the distance at which it should normally be able to see them.

The acuteness of vision varies with the light. Artificial light has been recommended as admitting of more uniformity; and, if less intense than bright daylight, it would allow the pupils to dilate more and so render more manifest any defective adjustment, as this latter is to a degree remedied by a narrow pupil.

The acuteness of vision diminishes with advancing years. At forty years it begins to sink rapidly, about as follows: at fifty years having diminished about one-fifth of its whole amount; at sixty years, one-third; and at eighty years, one half.

With regard to the determination of the far-point by the ophthalmoscope, it must be remembered that there are two methods of ophthalmoscopic examination, that of the upright and that of the inverted image. The process in the upright is as follows: a point of the fundus oculi illuminated by light reflected from the ophthalmoscopic mirror into the eye, sends out rays again through the ocular media into the air. Arrived in the air, they will have directions such, that if they were considered as passing into the eye instead of leaving it, they would come to a focus at the same point from which they started. These directions, then, if we suppose the accommodation inactive, will depend on the particular refraction of the eye under examination. They will be parallel if the eye in question is emmetropic; they will be convergent towards the observer if the eye is myopic, and divergent if it is hypermetropic.

If the observer's eye is emmetropic, and adapted for its far-point, he will see distinctly without assistance of any glass a picture of a point of the retina of the observed eye, if the latter is also emmetropic and adapted for its far-point. If we suppose several points of the retina or fundus oculi under observation to have sent out rays, as is the case, the observer will see an upright picture of them; the point which is above will appear above.

If on the other hand the eye to be examined were myopic, the rays from the fundus would, when arrived in the air, converge to a point at a definite distance in front of the eye. The supposed emmetropic and non-accommodating observer, if near to the patient, between the patient's eye and the point to which the rays converge, is not then adapted for the converging rays; but with the assistance of an appropriate concave glass, he would be; and an upright image might be seen as before.

If, again, we had to do with hypermetropia, the rays from a point of the fundus would, when arrived in the air, be diverging towards the observer; and the emmetropic observer would not be adapted for these diverging rays, except by accommodating, or by the aid of an appropriate convex glass.

Therefore, if we suppose the eye in question to exert no accommodation, we can infer it to be emmetropic, myopic, or hypermetropic, respectively, according as the emmetropic observer accommodated for parallel rays requires in order to see distinctly the upright image no glass, a concave or a convex. The strength of the glass and its position indicate the far point.

If the observer or patient should accommodate during the examination, it is equivalent to an alteration of refraction. If the observer is ametropic, we can suppose his ametropia corrected by a glass. The details of the corresponding changes in the examination can be understood with some attention, and have recently been described by Dr. Loring in English, and by Dr. Mauthner in German.

Another means of recognizing a *high degree* of myopia consists in using simply a mirror, perforated, or with the central part uncoated, and at a greater distance from the patient than his far-point; then we get an inverted image of a portion of the fundus, the image being formed in the air, in front of the eye, at the distance of the far-point, supposing the accommodation inactive. If the observer then moves *to the right*, the image seen seems to move *to the left*; whereas, if the eye to be observed were hypermetropic, the picture seen under similar circumstances would be upright, and would seem to move *in the same direction* as the observer moves (to the right, or the left, up, or down).

Reports of Medical Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

CHARLES D. HOMANS, M.D., SECRETARY.

AUG. 8th.—*Enlarged and Hypertrophied Stomach; Contracted Duodenum.*—Dr. G. C. SHATTUCK reported the case.

The patient was a woman, 65 years old, symptoms of disease having existed for several years. Four years ago, she vomited a considerable quantity of blood, and afterwards had no very severe symptoms till December, 1869, though she had been three times during the interval in the Samaritan Hospital, for cough, irritable stomach, &c. Since the last date she has had, at times, attacks of vomiting, very severe in April, 1870, and since then occurring more or less nearly every day; she was in the City Hospital for a few weeks this summer, and finally entered the Samaritan Hospital July 8th, and died there, Aug. 3d, from inanition. There was considerable epigastric pain and tenderness at times in the right hypochondrium; the bowels were constipated; the matter vomited consisted of ingesta, watery fluid and chocolate-colored liquid in varying quantities, sometimes a quart at once.

The stomach was enlarged and its walls much hypertrophied. The pyloric orifice was very greatly dilated ("béante"), and two fingers' breadth beyond was an annular and extreme contraction of the duodenum, the passage through the intestine at this point being only about one fourth of an inch in diameter. The large intestine was closely adherent to the duodenum, and in the interior was an apparent loss of substance corresponding to the adhesion, as if ulceration were taking place as a preparation for perforation.

Dr. JACKSON thought that the contraction of the duodenum might have been the result of a chronic ulcer, to which this portion of the intestine is liable; and he referred to a case of ulcer at the pylorus, in which the contraction was as great or even greater—the distention of the stomach being perfectly enormous. The condition of the large intestine he especially remarked upon. When preparations are being made, in the course of disease, for an opening into a cavity that is lined by a mucous membrane, ulceration or a destruction of the tissues takes place upon the diseased surface, and at a properly selected point; and, sooner or later, a similar process is not unfrequently set up upon the mucous surface, and at a corresponding point. Dr. J. has seen cases of this sort where there was disease of the gall bladder or ducts, and nature has evidently intended to effect an opening into some portion of the alimentary canal. In Dr. Shattuck's case, the duodenum was nearly closed; and, as the chyme could be got rid of, mainly, in no other way, it was to be carried directly into the large intestine. In thoracic aneurism, Dr. J. has several times seen ulceration upon the inner surface of the œsophagus or intestines, and corresponding to the nearest point of the diseased cavity; though what object nature could have in setting up a process that, when completed, would result in the immediate death of the patient, can hardly be imagined. Cruveilhier figures such a case; but Dr. J. knows of no author who has made any general remarks upon the above pathological fact.

Dr. KNIGHT thought this occurrence might nearly always be explained by some interruption or other modification of the nutrition of the part, as in the case of aneurism, by pressure; this he thought a more philosophical explanation.

Dr. JOHN HOMANS agreed with Dr. Jackson; he considered it a remarkable instance of intelligence in nature.

To Dr. LANGMAID Dr. Jackson said, the thickening sometimes noticed about these ulcers consisted of a thickening of the ordinary tissues and of the cellular tissue outside, as in any condition of chronic inflammation. He thought ulcer of the stomach was not specific in any way, merely an ulcer which selects for some unknown reason a certain portion of the stomach and small intestine.

AUG. 22d—*Deformity in the Fœtus, apparently produced by Mental Impression on the Mother.*—Dr. MINOT reported the case.

A respectable married woman, early in her second pregnancy, while riding in a street car, observed a man, sitting opposite, who had lost all the fingers of one of his hands. She afterwards related the circumstance to a lady (who reported the facts to Dr. Minot), saying she feared her child would be deformed. The child, born at the full period, and healthy, had no fingers on one of its hands, the thumb alone being perfect, thus exactly resembling the mutilated hand the mother had seen.

AUG. 22d.—*Letter from Bagnéres de Bigorre and Cauterets.*—Dr. MINOT read the following extracts from a letter from Dr. JEREMIAH WHIPPLE, of Boston, giving an account of Bigorre, and of the mineral waters of Cauterets, in the Pyrenees, places much resorted to by invalids with affections of the chest and other diseases:

"I went in June to Cauterets, about 40 miles from Pau, where I took the waters and baths for nearly a month. While there, I studied their effects on various diseases, as closely as I could. I had occasion to know intimately some cases, and more or less of a good many others, and I am convinced that the waters, applied with judgment, may be of the very greatest benefit, especially in many cases of pulmonary disease. In my own case [pleurisy], their effect was certainly excellent, and every case I saw was more or less benefited.

"The waters are alkaline and sulphurous, varying in temperature from 20° to 53°, Centigrade (68° to 127°4, Fahrenheit), and different springs seem to suit different cases, even of the same diseases. Before I had taken the waters ten days, I did what I had not done since December—slept equally well on both sides; and, for the first time in six months, had an appetite for my dinner, and was able to walk to *my* spring, a mile and a half, up hill, without being used up for all day.

"I have seen the effects of these waters on other cases of pleurisy, and on many cases of different stages of tuberculosis. The effect of a judicious course of the waters seems to be to aid very materially in breaking down the old adhesions, and absorbing the morbid thickening of the membranes, in the first disease, and helping to cicatrize cavities in advanced cases of the second, and of producing some effect in early cases, which certainly improves the respiration, and equally certainly is of great general advantage. That the waters have a great reputation you will judge from the fact that, through the months of July and August, there are often 5000, and on the average 4000 people in a little town where there are but 1100 *indigènes*, and where the only attraction beyond a few days is the water. That they do all that those whose interest it is to 'write them up' claim, is, of course, absolutely false. That they do very serious harm, if applied to the wrong cases, or if given without fixed rules, is certainly true. I saw one or two cases of brisk hæmoptysis from taking them after very recent congestion, and from my own experience I found that an over-dose made mischief at once. I knew what I was about, and only took over-doses as experiments. I risked two tumblers at one time, and found the whole world growing black, and my sight leaving me within half an hour, and my nose (*only* the nose, fortunately), bleeding briskly. A foot-bath at full temperature for half an hour set me right again, and after a second trial I thought I knew what I wanted in regard to the strength of the water. This, however, was the strongest spring, and I found myself more susceptible than usual to the effects of the water. A full glass, however, at a time, is considered the maximum dose—this repeated two or three times a day.

"The benefit in some cases that I have seen, of whose previous history I knew something already, has been most marked and gratifying. Notwithstanding what I had heard of them, I had but little confidence that the waters deserved a tithe of what is claimed for them; but my own experience, and as close observation as I could give for a month to their effects, have very much modified my opinion, and I shall follow the cases with which I have become acquainted with the greatest interest.

"Cauterets, I should say, is too high [3254 feet above the sea] for most cases of advanced phthisis, and scarcely suitable for any except during the months of July and August. It is a beautiful spot, but, aside from the beauty of its scenery, does not offer much in the way of pleasant distraction. It is surrounded on all sides by very high mountains, and the basin in which it is situated is in no place more than from a quarter of a mile to half a mile wide. From its height and situation the change from noonday temperature to that of the evening and night is very great. After passing the middle of the day in as little clothing as the law would be content with, one is always glad of an overcoat at night, and in case of a storm a fire becomes a necessity. You will see how much care would be requisite to guard against such changes for a long time, and how few would be willing to take that care. As for myself, I felt better from the moment I arrived there, as I always do in a higher region; and being rendered, as all are, very sensitive to changes of temperature by the use of the waters, which act largely on the skin, I never stirred, scarcely even at noonday, without an overcoat, and so escaped colds. In regard to the waters, I repeat, I am more and more convinced of their efficacy, as I watch my own case and several others which have been all summer under my eye.

"We are now [July 24th] settled in Bigorre [elevation, 1760 feet above the sea], just in the edge of the Pyrenees, where we have full benefit of the delicious mountain air, and cool evening breeze which invariably follows the rather warm day. Our balcony overlooks a number of pretty gardens, with the Pyrenees just beyond, which look cool and comfortable even in the hottest days. In the daytime the mercury often ranges from 80° to 90° Fahrenheit, but one would never imagine it without consulting the thermometer, for the heat is perfectly dry, and the air never dead or oppressive. The heat here does not seem, either, to provoke the excessive thirst which we feel in our summer weather at home. The evenings and nights are invariably cool, and for the most part perfectly dry, so that one can enjoy the freshness without danger. This place is a favorite summer residence for many who pass their winters at Pau, or along the Mediterranean. There are many who pass the whole year here, for, though lacking many of the advantages of Pau, yet the winter is comparatively mild, and at that season the living, especially in the item of rent, is very cheap. It is, I should say, about the best summer climate possible, not only for invalids, but for every body else. The place is dull, to be sure, doubly dull in these times of war; yet there is enough going on to keep one awake most of the day, and quite enough for any place the resort of invalids. But if it is dull, it is pretty, and the air, though often hot, is never, or almost never, enervating. The neighborhood of the mountains keeps it fresh and changing. I have seen the mercury higher than 80° only once for a few hours, when everyone called the day unusually hot, though I suffered no inconvenience, as the air was perfectly dry."

OCT. 24th.—*Epidermic Engrafting.*—Dr. PORTER gave a brief history of this new process, and exhibited a patient on whom he had done the operation.

The operation is one first introduced by M. Reverdin, an *interne* in one of the Paris hospitals, for promoting the healing of ulcerated surfaces by engrafting upon them small pieces of healthy epidermis. The operation consists in cutting from any part of the healthy skin, with the knife or scissors, small pieces of epidermis, implicating as little as possible the vascular layer of the skin, and planting these in small incisions made in the granulations and strapping them into place by adhesive plaster. After a few days, varying from seven (7) to fourteen (14), if the engraftings are successful, small islands of epidermis appear, which increase in every direction, and thus materially diminish the time which would otherwise be required for the healing of such surfaces, and in all probability the contraction which results from cicatrization of large granulating surfaces. The first reported case which I can find is one by M. Sée, reported at the Imperial Society of Surgery at Paris, June 1st, 1870, and published in the *Gazette Hebdomadaire* July 22; another, in the *Lancet* July 9th, a case by Mr. Pollock, of St. George's Hospital, London. The case which I have to present to the Society to-night does not, I am aware, fully illustrate all that may be claimed for the operation, as it is one of varicose ulcer of the leg, which would have probably quickly recovered under proper treatment without the engrafting; but it does prove—and this is the point to which I would especially call the attention of the Society, what, so far as I am able to learn, has not been tried before, viz.—*that these engraftings can be made successfully upon ulcers of the lower extremity, and the patient allowed to walk about and work during the process of healing.* Before giving the history of the case, I would mention one exceedingly interesting fact connected with the new growth, mentioned to me by Mr. Pollock, that for some weeks there is no sensation, but after that time this is gradually established, apparently showing that at first there is a want of nervous supply to the new growth.

The patient was a man, aged 56 years; he had an ulcer of three months' duration on the internal aspect of the leg, a little above the malleolus, 3 inches by 2 inches in size, and a varicose condition of the leg. Oct. 4th.—Two small pieces of skin were inserted and strapped into place. Oct. 7th.—Strap removed, and no appearance of pieces. Oct. 11th.—Strap removed; one small island appearing, twice as large as the head of a pin. Ulcer healing from edges. Oct. 14th.—The small island has extended, and has bridged a third of the transverse diameter of the ulcer. Patient states that he does his regular work every day. Oct. 18th.—The ulcer still healing from the edges, and the island is no longer an island, there being a strong bridge of skin uniting it to the outside edge of the ulcer. Oct. 24th.—The ulcer is almost completely bridged across and still healing from edges.

Dr. COOLIDGE also exhibited a patient on whom he had tried this method of inducing cicatrization. The man had suffered for twenty years from ulcers of the leg, which had healed under proper treatment and broke out again. When he entered the Massachusetts General Hospital, there was one extensive ulcer occupying a large part of the anterior surface of the leg above the ankle; under proper treatment this diminished in size, leaving an ulcer six inches by four, which would not heal, and for the last six weeks, though the patient was confined to bed, no improvement had taken place. Oct. 2d, Dr. Coolidge applied a blister to the sound skin, and just before it had risen punctured some small vesicles and drew the epidermis from off the rete mucosum; then, by means of a small forceps pincing the raw surface up, he removed a layer comprising all the rete mucosum and engrafted it into one of the granulations of the ulcer; he also, with his scalpel, scraped the surface of the blister and spread upon the ulcer the cells which were immediately over the papillæ and cutis. This operation was performed ten to twelve times and the ulcer immediately strapped; the plaster was not removed for ten days, when a few doubtful spots were seen on the surface of the ulcer, which had considerably diminished in size. It was again strapped, and ten days afterwards—twenty days after the last operation—the plaster was again removed, and there was seen an undoubted island of new epidermis in the middle of the ulcer, and several white spots in the new skin surrounding it, which he considered to be the other engrafted points.

Oct. 24th.—*Suppuration of the Frontal Sinus.*—Dr. Hodges reported the case. It occurred in a man, 48 years old, and had commenced, without known cause, fourteen years ago. The accompanying pain in the forehead had been intense at times, and was always relieved by a discharge of pus from the nostril. About eight years ago, a fluctuating swelling formed over the sinus, beneath the integument of the forehead, and this was punctured with a lancet a few months before the patient was seen by Dr. H. Pus was evacuated, and the swelling, which persisted, had continued to discharge ever since. On laying the abscess freely open, a single small orifice, through the frontal bone, communicated with the cavity of the sinus. The sinus was trephined and found to contain a large amount of very offensive pus. No necrosed bone was detected. The operation was followed by great relief. Dr. Hodges spoke of the rarity of this affection, the occasional presence of air in the frontal tumor, and the possibility of the inflamed sinus opening into the cavity of the cranium, or exciting inflammation of the meninges of the brain.

Dentigerous Cyst.—Dr. Hodges exhibited two teeth, a canine and a bicuspid, removed from a dentigerous cyst, which had developed at the side of the lower maxilla, in a boy ten years old. The cyst had been but four months in forming. The external wall, which was thin and parchment like, on being excised permitted the easy extraction of the misplaced teeth. Dr. Hodges remarked that this was the third specimen of this somewhat infrequent abnormity which he had exhibited to the Society.

Oct. 24th.—*Restoration of the Membrana Tympani after its almost complete Destruction from chronic Inflammation.*—Dr. J. O. Green, Jr., reported the case.

A man, aged 40, in good health, except marked tendency to nasal catarrh, had suffered from otorrhœa on the right side from childhood, the result of which had been a periostitis of the meatus, which had nearly closed that passage with hyperostoses, and an almost complete loss of hearing on that side. Some eighteen months ago, without any known cause or marked symptoms, the hearing of the left ear, previously good, began to be impaired; he soon became very deaf, and a discharge began from that ear, which continued till August, 1869, when I first saw him.

There was then a small polypus about the size of a pea projecting from the tympanum through a perforation in the posterior part of the membrana tympani, with a purulent discharge. The polypus was removed by the wire snare, and the membrana tympani could be then seen with a large irregular perforation on the posterior segment, and another somewhat smaller one on the anterior segment, the two perforations equal in extent to about one-third of the whole membrane. The remaining membrane was of a dull, pure white throughout, exactly resembling macerated epidermis, and in only one spot, on the edge of one of the perforations, was there the least sign of life.

From that time, although the otorrhœa was gradually checked, the perforations continued to enlarge from week to week, without pain or other symptoms, the membrane slowly melting away. At the end of three months there was only a narrow bridle of membrane running from the end of the manubrium downwards to the periphery and a small triangular portion on each side of the hammer. In three months more this bridle had disappeared, the two perforations had coalesced, and the manubrium lay in position with no membrane on either side of it, the only portion left being on each side of the small process of the hammer. I was unable to discover any of the peripheric portion of the membrane, although the result would show that such must have remained. The mucous membrane of the tympanum was seen to be red, slightly swollen, and from cold it exuded a slight discharge. The Eustachian tube was pervious when the swelling of the mucous membrane was least, and closed when it was extreme. The hearing gradually diminished as the membrane was destroyed, till the raised voice could he heard at only two feet, and the watch only on firm contact.

This condition remained till about three months ago, when I found that a new membrane had begun to form, and this has since progressed steadily till now, as will be seen, there is an almost complete restoration, a perforation the size of a pin-hole only remaining. The new formation sprang from all the edges simultaneously, from the periphery, the edges of the old membrane, and from the sides of the manubrium; it gradually extended, forming a crescent-shaped opening around the manubrium, and this closed to a circular opening, two lines in diameter, just behind the lower end of this bone. Up to this point the new membrane was tense, and exactly in the position and on the plane of the normal membrane; from here, however, the remaining opening seems to be closing with relaxed cicatricial tissue which collapses inwards. The otorrhœa entirely ceased some two months since.

Examination now shows a firm tense membrane occupying the position of the normal membrana tympani; at the upper anterior portion the projecting end of the small process of the hammer is seen, but the manubrium is concealed in the swollen membrane. The periphery of the membrane is grey, as in a thickened membrana tympani, while the tissue more recently formed and surrounding the small perforation is still swollen and slightly red.

Without a microscopic examination, it is impossible to speak of the histological elements of this tissue, but by good illumination I have been able to see fibres radiating from the periphery towards the centre as they are seen in the normal membrane.

The treatment adopted was cauterization of the base of the polypus a few times with the solid nitrate of silver till it had been destroyed, syringing often enough to keep the ear clean, the instillations of various astringent solutions, sulphate of zinc, zinc and alum, sulphate of copper, and the insufflation of powdered alum. During the last few months a solution of sulphate of copper, gr. ij. to the ounce, was used with intermissions and occasionally a few drops of muriate of ammonia, gr. x. to the ounce, was injected through the Eustachian tube by means of the catheter.

The hearing, which had been seriously affected, has greatly improved, but is still somewhat variable, probably owing to a small amount of mucus occasionally clogging the action of the ossicula. A large part of the time he hears "as well as he ever did in his life." When the small remaining perforation heals so as to exclude the outer air, this changeability will probably cease.

The disease was a marked example of chronic inflammation of the membrana tympani, complicated with catarrhal inflammation of the tympanum, as described and figured by Gruber in his Ohrenheilkunde. The case is interesting from the very perfect restoration of the membrane after such extensive destruction, and it is this to which the attention of the Society is called.

Oct. 24th.—*Stricture of the Œsophagus; a small pulmonary cavity surrounded by dense tissue gives rise to a low-pitched blowing respiration.*—Dr. Knight reported the case.

A man, 50 years of age, entered one of the surgical wards of the City Hospital on the 29th of August last, on account of difficulty in swallowing, much of the food being thrown back without reaching the stomach. He said that the difficulty had existed only three weeks.

On the day of his admission, a probang, one and a half inches in circumference, could not be passed with such force as it was thought justifiable to employ. An elastic catheter was passed, however, and the stricture was reported as being about three inches below the thyroid cartilage and moderately tight.

The patient stated that, two years before, he had been bitten on the lip by a man affected with syphilis; that in consequence he had a sore on his lip of several weeks' duration, followed in a short time by a "sore" upon the penis, swelling in the groin, "sores" about the anus, sore throat and falling of hair.

He had no pain in the throat and had never spit up any bloody matter. In the absence of signs of aneurism or other tumor pressing on the œsophagus, the stricture was thought to be due to cancer or syphilis, with a strong inclination to the latter diagnosis, on account of the preceding history. On the 31st, the bougie, one and a half inches in circumference, was passed.

On the 10th of September he was transferred to the medical side, on account of severe, constant cough, which he said had existed three or four weeks. He could then swallow liquids, soft-boiled egg, milk toast and wine jelly.

On Sept. 11th, examination of the chest gave me the following signs:—Relative dulness on percussion in right clavicular region. Considerable bronchial element in the respiratory murmur at right top, front and back, perhaps not enough to be necessarily morbid. Occasional dry bronchial râles throughout chest.

Sept. 25th, examination revealed a marked change in the physical signs at the apex of the right lung. On percussion, there was tympanitic resonance in clavicular and subclavicular regions, cavernous respiration, of low pitch, and bronchophonic voice. On the 26th, respiration was at times stridulous. On the 28th and 29th, swallowed but little if any liquid, and note was made by Mr. Spooner, medical house officer, that "what he took seemed to pass the seat of stricture, but after taking three mouthsful of liquid he regurgitated nearly the whole, if not all of it. Probang passed down throat as readily as usual through the stricture at the upper part of the œsophagus, but was arrested about ten inches from the lips, measured on probang. The patient gradually failed, and finally succumbed Oct. 3d."

An examination of the body was made by Dr. Webber, 23 hours *post mortem*, who reported the following appearances:—

"In the œsophagus, about four inches below the epiglottis, was a fungous, cauliflower-like mass nearly filling the calibre so as scarcely to allow the finger to pass, and fully three inches long. Above the main part of the growth were several small nodules of the same.

"In the trachea, at its bifurcation, was a mass of disease half an inch in diameter. On right of trachea, nearly opposite apex of lung, was a mass of disease which involved the pleura, if not the lung. Neighboring glands much enlarged. Under the microscope, the growth appeared to be epithelial. Right lung at apex very firmly adherent, lung tissue being torn in its removal. Cavity at apex, of the size of a pigeon's egg. A part of cavity contained gangrenous-smelling pus. Surrounding lung tissue consolidated. The tissue around the cavity seemed consolidated from inflammatory action. The apex was firmly adherent to the morbid growth, and there was a nodule of almost cicatricial hardness at that spot, near the border of the cavity. A section, examined microscopically, showed only inflammatory products."

Dr. Knight said that the case was particularly interesting to him, as it showed that even a *small cavity with rigid walls* could give rise to a *low-pitched* cavernous respiration. Dr. K. said that many good auscultators denied altogether that this low-pitched blowing respiration, which was nothing like the bronchial, and which could only be confounded with the normal vesicular murmur, was indicative of a cavity. It is admitted, however, by Walsh, Flint and DaCosta, and an appreciation of it is implied in Barth and Roger.

Dr. Jackson and Dr. Webber were of the opinion that the lung disease was not of the same nature as that in the œsophagus.

Medical and Surgical Journal.

Boston: Thursday, November 24, 1870.

A FEW HINTS TO MEDICAL AUTHORS.

The season has now come for good, earnest, hard work for those members of the profession who are willing to lay aside, for a time, the scalpel and the pill-box, and take up the book and the pen for mental improvement and study. Our request for aid a few weeks ago was met with remarks on the hot weather, and the inability for any mental application experienced by our brethren; and, indeed, we felt indisposed to urge our friends, while ourselves suffering from the inclemencies of the summer. But now, the cooler weather puts vigor into our bodies and adds vital force to our minds; and writers of medical works and of the more ephemeral periodical literature should feel moved to use the pen for the illustration of their own thoughts and the good of the profession.

Our medical literature contains a great deal of trash—let us start with that dictum—and how are we to get rid of it? As Editors, we constantly find ourselves obliged to wade through many bushels of chaff in the medical journals of the day for the few grains of wheat concealed somewhere in its depths, and we feel constantly impelled to inquire why this article was written or that book put forth, to mystify the truths which we need all possible light to illuminate. We cannot fail often to see the utter professional ignorance which all the sophistry of words cannot conceal; we cannot help feeling that the practice of a brother must be very limited and his opportunities of investigation very confined, when he is forced to magnify some apparently very common malady into a "unique case"; the veil of a cunningly related case, to which Dr. X. has been called, is generally too thin to conceal from an experienced eye the charlatanry of his advertising, a veil which, like the *coa vestis*, serves only to make more manifest that which it cannot conceal. Altogether there *is* a great deal of trash in our medical literature.

A good medical article or book should start with certain well grounded principles; sound truth for its basis, a thorough knowledge of the subject under treatment, in its author's mind, a clear and concise method of putting it into language, in a style which shall be attractive to the mind of the average physician. Could we but find these characteristics in all the works of the profession, we might with pride call ours a learned profession, and our literature in its way might hold equal rank with the living, inspiring words of the pulpit and the forum.

Truth cannot exist in the medical book without it is first found in the writer; a knowledge of the subject cannot be attained without actual professional study and investigation. Behind that we need higher and higher qualifications in our schools before giving the medical degree, and still farther back we should look for a more advanced standard of preliminary education. Indeed, in this last view of the matter, we feel our Medical Schools are behind the day. When they are willing to require the more elevated attainments which the growing age demands, before granting their license to practice; when they are disposed to demand as a starting point a more thorough mental and literary training, then, and not till then, may we look for good authors and good members of a learned profession.

We are merely hinting at suggestions which we wish might guide our author brethren: but if such suggestions as these had but presented themselves to the medical authors of the past score of years, we should have had less chaff and more wheat; less of the roar of the cannon and scream of the shell, and more of the precision of the rifle; fewer tons of ore, and more ounces of the precious metal; less volumes of words, and more pages of truths.

We cannot refrain in conclusion from quoting a wise criticism from a memorial article in the Edinburgh Medical Journal for August, on a distinguished member of our profession, lately deceased. The author says:

"Syme's 'Principles of Surgery' is also in many respects a very remarkable book.

"Firstly, The fifth and last edition is smaller than the first.

"Secondly, It is very brief; not an unnecessary word is inserted. The whole object of the book is to give only what information is needed, in as few and simple words as possible. It reminds one of Mr. Syme's lectures, in which his only object seemed to be to give the maximum of instruction in the minimum of words.

"Thirdly, It is written in plain, simple English, and contains not a slovenly phrase or an ill-constructed sentence.

"Fourthly, It encourages the reader to think and reason for himself, and shows how the treatment of the infinite varieties of disease are all based on a few broad and safe principles, and thus escapes the snare of burdening the memory with masses of antiquated quotation, or crude novelties of treatment. Hence its wonderful popularity and freshness. It is old, but not stale. Syme might have put on its title page the motto lately used by one of his most distinguished pupils:—

> 'Non hypotheses condo, non opiniones vendito,
> Quod vidi, scripsi.'"

Iodide of Potassium in Asthma. *Messrs. Editors*,—Much has been said and written in past years upon the merits and demerits of the Iodide of Potassium in Asthma.

And of late, I notice, a writer has been treating the subject, and regards its application as more especially appropriate to bronchial asthma; he relates a case in which he exhibited the drug in large and oft repeated doses, with complete success, for that time, but failed most signally with this treatment in a future attack of the same patient, soon after.

Now, sir, I am not disposed to criticize that writer's views of the disease, or his practice, for he is evidently on the right track and in good season.

But I think he is in too much hurry, and treats the patient with too large doses, and repeats them too often; he, in fact, feeds his patient with a powerful and potent remedy too rapidly, faster than the system can appropriate it; and hence the absorbents and secernents are to a certain extent over-charged, surfeited, and perhaps for a time paralyzed; and in the future have either no desire for that kind of stimulus, or are unable to receive it.

It has been my painful privilege and experience to know much of this disease for a period of over fifty years, by personal acquaintance. I inherit it as an heir-loom from two generations before me; and by that same law of transmission, it outcrops again in the one which follows me. I have met the disease in most or all of its phases, in my own person and in the sick room, and have treated it in all its forms; the dry, the humid, the spasmodic or bronchial, and the more fearful emphysema. I say more fearful, because the conditions of this disease are such as to render it of greater duration, equally or more distressing, and affording no hopes of cure, and but little prospect of relief.

I, too, have often administered this drug, and like the writer alluded to, have met with varied effects, but think I have seldom found a case where it lost its effect so absolutely or so soon, although such instances may occur.

In my own case, although constitutional, it is bronchial, spasmodic and nervous. I have used the remedy for years, to be counted by tens, perhaps by twenties. And yet it has never failed me, and is thus far ever sure to be a remedy of inestimable value on every occasion of attack; but I never give such large doses, seldom more than five grains a day, and that at bedtime. And if threatened or attacked, this quantity taken in the evening usually insures me a night of comfortable rest, with ability to resume my daily labor on the following day. But I do not repeat the dose unless the attack is also repeated; and here, it seems to me, is the cause of the success in one case and of the failure in the other, for, surely, I have ever found it a most valuable remedy for myself and others thus affected. Nor do I find its benefits apply to the bronchial form only, but regard it as an available and reliable remedy in other forms also, and in none have I found it to fail completely, unless in that peculiar form or stage when the diaphragm is seemingly flexed and immovable like a sheet of iron across the trunk, and the patient in a gasping state.

Here the iodide does fail, and here, if ether or chloroform affords no relief, remedies are of little use.

J. P. Whittemore, M.D.

Haverhill, November, 1870.

Admission to the Massachusetts Medical Society.—We had thought that the information contained in the Journals of the past few weeks was sufficient to settle the exact position of the Society in regard to admissions. As an answer to numerous inquiries, however, we are requested to state that, at present, *no one can enter the Massachusetts Medical Society without examination.* The Board of Censors for Suffolk District and for the Society at large will meet, according to the By-Laws, on the days succeeding the examinations in the Medical Department of Harvard University, and on the Thursday preceding the annual meeting of the Society, at the house of the Secretary, Dr. B. Joy Jeffries, 15 Chestnut street, Boston, at 4 o'clock, P.M.; also at 10 o'clock, A.M., on the day and at the place of the annual meeting of the Society.

Herpes Ophthalmicus.—B. T. Vernon (*St. Bartholomew's Hosp. Rep.*, IV., 1868) speaks of cases of *Herpes Ophthalmicus.* All parts of the fifth nerve may be affected either isolated or in combination. Neuralgia may occur solely or together, with herpetic eruptions on the eye-ball and its surroundings (phlyctenular ophthalmia and herpes zoster frontalis); but also paralytic affections of some branches of the oculomotor nerve are observed simultaneously, and this may be, perhaps, only a curious coincidence, but also in causative relation with the affection of the trophic or sensitive functions of the fifth pair.—*Medical Record.*

Medical Miscellany.

Long Island College Hospital—New Hospital Building.—We learn that the Regents of the Long Island College Hospital, Brooklyn, N. Y., finding their present accommodations insufficient, are engaged in the erection of a new building, to be completed and ready for the reception of patients by the 1st of March ensuing. The new wing will be about 150 feet front and three stories high, and is to be constructed on the most approved principles of modern hospital structures. Part of it will be occupied as an amphitheatre and operating room.

Biographical Dictionary of Deceased American Physicians.—Dr. J. M. Toner, of Washington, D. C., is desirous of obtaining information which will aid him in the publication of a Biographical Dictionary of Deceased American Physicians. The work is already in a state of considerable forwardness, and is designed to contain a biographical sketch of every deceased practitioner of regular medicine, from the earliest settlement of our country to the present time.

Hundreds of physicians have died in different parts of the United States, after devoting a long and useful life to their profession, of whose existence and labors there is no record. This should not be so. The want of a work furnishing an outline of the lives of American physicians has long been felt; and that the project meets the approbation of the profession and of the relatives of deceased medical men, has already been evinced by valuable contributions from different parts of the country.

The success of the undertaking must obviously depend, in a great measure, upon the coöperation of the medical profession, and such relatives and acquaintances of deceased physicians as may have it in their power to communicate the essential information.

Diphtheritic Paralysis.—Dr. Leube reports a case (*Arch. f. Klin. Med.*), in which, in addition to the loss of motor power, there were lowering of the sensibility of the skin and complete loss of sensation in the mucous membrane of the larynx above the free border of the vocal cords; whilst coughing was excited as soon as a sound was passed below the glottis. The difference is explained by the lower part being supplied by the tracheal branch of the recurrent as well as by the superior laryngeal nerve. The patient was fed for ten days by means of an œsophageal tube, and treated with strychnine, injected subcutaneously, in doses of one twelfth to one fourth of a grain daily. The improvement was rapid in all the symptoms.—*Dub. Med. Press & Circular.*

Optic Neuritis.—Dr. Hughlings Jackson, in cases of hemiplegia, has noticed this affection in greater frequency in connection with left-sided paralysis.

In lesions of the encephalon or meninges, Bouchut believes it is in general more marked in the eye corresponding to the hemisphere which is more seriously affected; Dr. Jackson, however, denies the existence of any relation between the side of the brain diseased and the eye affected.—*N. Y. Medical Record.*

Nitrobenzole.—This substance, which operates as a narcotic poison in vapor as well as in a liquid state, may, in the rapidly fatal cases, produce coma, which may be mistaken for the insensibility of apoplexy. But the poison leads quickly to death when coma has been induced, and is detected by its strong odor, resembling that of bitter almonds.—*Da Costa's Diagnosis.*

In the eleven medical schools of London 433 matriculants have been registered this year.

Correction.—On page 321, second column, 11th line from foot, for "seems" read *serves.*

To Correspondents.—Communications accepted:—The Ague Theory.—Death from Ether.

Books and Pamphlets Received.—The Transactions of the American Medical Association. Vol. XXI. 1870. Pp. 612.—Constitution and By-Laws of the Medical Library and Journal Association of New York. Pp. 16.—Transactions of the Medical Society of the State of West Virginia. Pp. 82.—Syphilis of the Nervous System. By E. L. Keyes M.D., Bellevue Hospital, New York. Pp. 44.—On the Uses of Wines in Health and Disease. By Francis E. Anstie, M.D., F.R.C.P., Editor of the London Practitioner. New York. Pp. 84.—The Illustrated Annual of Phrenology and Physiognomy for 1871. By S. R. Wells, Editor of the Phrenological Journal and Life Illustrated. Pp. 70.

Married,—In this city, Nov. 18th, Dr. George Faulkner to Miss Abbie S. Adams.

Deaths in fifteen Cities and Towns of Massachusetts for the week ending Nov. 19, 1870.

Cities and Towns.	*No. of Deaths.*
Boston	103
Charlestown	14
Worcester	17
Lowell	17
Milford	4
Chelsea	2
Cambridge	14
Salem	6
Lawrence	15
Springfield	7
Lynn	5
Taunton	2
Newburyport	2
Fall River	18
Haverhill	2
	228

Prevalent Diseases.	
Consumption	49
Croup and Diphtheria	13
Scarlet fever	10
Typhoid fever	9
Pneumonia	12
Dysentery & Diarrhœa	8

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Nov. 12th, 103. Males, 55; females, 48. Accident, 3—apoplexy, 2—inflammation of the bowels, 1—bronchitis, 5—inflammation of the brain, 2—congestion of the brain, 1—disease of the brain, 1—burned, 1—cancer, 3—consumption, 25—convulsions, 1—cyanosis, 2—debility, 3—diarrhœa, 2—dropsy 5—dropsy of brain, 1—drowned, 1—dysentery, 1—diphtheria, 1—epilepsy, 1—erysipelas, 2—scarlet fever, 6—typhoid fever, 2—gastritis, 1—disease of heart, 5—disease of the kidneys, 2—disease of the liver, 2—inflammation of the lungs, 5—old age, 4—paralysis, 2—purpura, 1—premature birth, 1—puerperal disease, 1—scalded, 1—suicide, 1—tetanus, 1—unknown, 3—whooping cough, 1.

Under 5 years of age, 32—between 5 and 20 years, 8—between 20 and 40 years, 23—between 40 and 60 years, 19—above 60 years, 21. Born in the United States, 67—Ireland, 26—other places, 10.

THE

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Original Communications.

MEDICAL NOTES UPON THE ABORIGINES OF ALASKA.

Read before the Obstetrical Society, Oct. 8th, 1870, by D. F. LINCOLN, M.D., Boston.

BEFORE reading these "Notes," I would beg leave to acknowledge my indebtedness to Mr. W. H. Dall, who was so kind as to communicate them verbally to me, and who is my sole authority for the statements here made. But few of the facts here given are to be found in his work upon Alaska. Mr. Dall was in the closest personal relation for many months with the Indians of the Yukon River, from its mouth to Nuklukahyet, a distance of about 600 miles. With the Innuit (Eskimo) he was in less frequent contact.

Infanticide.—The country is incapable of feeding a large number of people, living in the savage condition. The chase and the fishery, as practised by them, furnish a very limited sustenance, and they have no other source of food. An Indian knows how much provision he can expect to collect in a year; beyond this amount he cannot go, and if his family grows beyond the limit of food-production, he naturally reasons, "Better let one live than two starve," and as a practical inference he proceeds to destroy his superfluous infant. This is done by exposure. The foundling is sometimes picked up by strangers, and brought up with care and kindness. But it is not fair to charge them with a want of natural affection; they are very kind to their children when living, and take good care of them. A girl-baby (as among the Chinese) stands a much greater chance of being exposed than a boy.

Children, though treated affectionately, are not longed for. As an almost invariable rule they are healthy, and do not appear to perish from the complaints usually incident to infancy. Their diet at first is exclusively the mother's milk, but when they reach the age of five or six months they are allowed a piece of fat meat to suck. Farinaceous food, the bane of civilized infancy, is, of course, out of the question with them. They sometimes die from an insufficiency of nutriment; for overwork, hunger and poverty will dry up the breast even of an Indian woman, especially if she be rather advanced in age. Mr. Dall noticed a few cases of convulsions, one resulting fatally; they occurred at from six to fourteen months of age, and were referable to no apparent cause except indigestion.

Fecundity.—The largest Indian family Mr. D. ever knew comprised six children. It is a universal rule, both with Indian and Innuit, that the family is small; it generally numbers from one to three children, and, beside this, an extraordinary proportion of their women are barren. He is unable to suggest the slightest explanation, either of the infecundity or the barrenness; unless, perhaps, the excessive toil, and the occasional starvation to which they are liable, be considered as causes.

Abortion.—He does not know of its occurrence as an accidental affair; and as to intentional abortion, or intra-uterine fœticide, it is not practised by the Indians. The Innuit, however, sometimes cause expulsion of the fœtus at about the fourth month, by forcibly kneading and compressing the uterus between the hands. He has known of two or three such cases. As to the use of instruments, such as bodkins or wires, the Indians are entirely too timid to venture upon such experiments. But a curious and remarkable exception to this timidity deserves mention here. It was the case of an Indian who was in imminent danger of death from retention of urine, owing to a stricture. After the retention had lasted two days, as a last resort they took him and performed perineal section, cutting open the urethra by way of the prostate. Their surgery had at least this recommendation, that it saved the patient; Mr. D. saw him a number of months later, in the enjoyment of good health. He was informed that the section was made in the median line, but they used no staff. They do not know of any mode of preventing conception. He is enabled to speak with confidence upon points of this sort, because he lived for months in Indian fashion, without meeting a single white man; and because they have not the idea of concealing anything of what we call delicate matters. A woman's confinement, for example, is not a reason for excluding any visitor, male or female, who may choose to look on.

Confinement.—As has been remarked, there is no mystery at all made of the act of parturition. Mr. D. has himself witnessed the entire process, from the commencement of pain till after delivery, and it did not last over half an hour. Indeed, they are usually sick a much less time. He has seen a woman leave a dog train, to which she was attached, go behind the bushes, and within half an hour rejoin the company, her new-born baby in her arms. When at home, the woman goes into a separate hut to be confined. Another woman accompanies her; the *accouchée* then gets on her hands and knees, while the *accoucheuse* kneels behind her, holding a piece of wood as large as a broomstick in her hands. This stick is passed over the belly so as to bear fairly upon the centre of the womb; the nurse then pulls with both hands, with all her might, while the patient holds back and pulls herself in the contrary direction. The baby comes very soon in answer to this rather urgent persuasion. A wooden trough, stuffed with moss, stands between the mother's knees, all ready to receive him. He is taken up, washed with their invariable substitute for soap—stale urine—and wrapt in a rabbit skin. Disagreeable as is this liquid soap, it certainly does its cleansing work as well as that manufactured by civilized men. The cord is tied in two places, and cut between. The child is put directly to the breast, and almost invariably finds his proper sustenance there at the first trial. The adult head is often asymmetrical, either from the mode of assisting delivery, or some other unexplained reason.

The woman always gets up in a very short time; Mr. D. has known but one woman who lay-in as long as two days, and in her case it was on account of other sickness.

They do not suffer from uterine complaints after childbearing. [In this respect they present a striking contrast with certain of the Indians of the Northwestern United States.] These remarks on childbed have a general application to the Innuit as well as to the Indians.

Indians generally are destitute of fortitude in bearing even slight pain. But in confinement, there does not seem to be any actual pain to complain of.

Puberty, &c.—Mr. D. "hardly thinks he ever knew a case of the occurrence of menstruation under 14 years." From 14 to 17 is the usual age with them. They marry when full-grown in stature. As to the age of cessation of the menses, it is hardly possible to make a statement, inasmuch as the Indians do not know their own ages with any sort of accuracy, and their appearance is no guide whatever.

Marriage—consists simply in taking a wife and living with her. Among the Ingalick Indians there is a great horror of incest, and they extend the notion of kinship so far as to exclude even fourth or fifth cousins from marrying or any sexual relations. These Indians are continent, relatively to those of the Koyukon tribe and others further east; yet even among them a married woman is hardly thought less of from the fact of her having too easy virtue. If she goes astray her husband beats her, but the man is not usually meddled with; it is considered the woman's fault, as it was in the case of Adam!

CHRONIC SYNOVITIS TREATED BY TAPPING THE JOINT AND PAINTING THE KNEE WITH TINCTURE OF IODINE.

By John Homans, M.D., Surgeon to the Boston Dispensary, the Carney Hospital, and The Childrens' Hospital.

S. S., a pedlar, 36 years old, presented himself at the Dispensary October 6th, 1870. His left knee-joint was greatly distended with synovial effusion, and measured four or five inches more than the right. He gave the following history of his case:

One year ago, without known cause, his left knee swelled and incommoded him for three or four days, and then got better. Since that time he has had three or four attacks, lasting from two days to a week; but the present attack, which began three months ago, has been more severe than any of the former ones; the knee has steadily increased in size, obliging the patient to lay by once in a while for a day or two. Lately he has had great difficulty in walking, and great pain at night, preventing sleep.

On examination, the left knee-joint was found to measure about five inches more than the right, and was distended with fluid, probably synovial. Later in the day I etherized him at his home, tapped the joint with a small trocar on its outer aspect, at a point about five inches from the extremity of the outer condyle, and drew off twelve ounces of clear, brownish, rather ropy fluid. The joint was tightly bandaged, and the patient kept in bed for four days; there was entire relief to the pain, no inflammatory symptoms, nor any constitutional disturbance. On October 12th, he began to paint the joint with tincture of iodine, as the effusion seemed to be increasing again. The next day he began to attend to his business, and has continued to do so since. On October 29th, the left knee measures half an inch more than the right; there is only a little fluid in the joint, and walking five hours a day causes no more uneasiness in one knee than in the other.

DEFECTS OF OCULAR REFRACTION, &c.

(Continued from page 343.)

Lecture III. Part II.—*Presbyopia.*

We have hitherto glanced at the principal general features of the subject. It is now time to look at some of the special defects which may be presented to the practitioner for treatment. The most frequently occurring of these is presbyopia.

Presbyopia results from a diminution of the accommodation. This diminution progresses physiologically with advancing years, and depends on changes in the lens-substance, which becomes harder with age. The accommodation begins to diminish in early life. This takes place in all eyes, but the emmetropic eye presents the typical form of presbyopia. The effect of this diminution must be to remove the near-point farther from the eye, so that an object can no longer be distinctly seen at so short a distance as previously. According to the position of the far-point, that is, according as whether the eye is hypermetropic, emmetropic or myopic, this progressive diminution of the accommodation will make itself felt earlier or later in life. In emmetropia the effect begins to be felt for the most part at about the age of 45 years, when, as is well known, many persons read easier by pushing off the book a little farther than the distance to which they have previously been accustomed. Such an eye may see well in the distance.

We must, however, remember that at about the age of fifty years there occurs a receding of the *far-point* so that an originally emmetropic eye becomes slightly hypermetropic. This so-called *hypermetropia acquisita* gradually increases so as to attain at 80 years the degree of from $\frac{1}{24}$ to $\frac{1}{10}$.

The gradual change in the accommodation is minutely described by Donders. In youth the emmetropic eye "sees small objects, by preference and without perceptible tension, at a distance of about six inches. At a later period, this distance becomes greater. * * * Thus the time approaches that close reading and working are attended with difficulty. Presbyopia thus announces itself. Seldom do we hear at the same time that work fatigues. The complaint is rather that vision is not accurate, &c."

Presbyopia being an affection of the accommodation, limits *the range* of distinct vision, but does not diminish the acuteness of vision. The latter should be normal to the age of the person; otherwise we must look for some other defect besides what is remediable by spherical glasses, such as astigmatism, opacities of the media, or disease of the fundus oculi, &c. If we designate a patient as presbyopic, without further statement, we understand him to be emmetropic, or at the most as having hypermetropia acquisita, and suppose him free from other disease or defects of the eye. If hypermetropia, myopia, astigmatism, or any disease of the eye were present, it should be stated, being more important than the simple limitation of the range of accommodation.

We must, in considering any particular case, remember other affections which cause the binocular near-point to recede; such as insufficiency of the interni, or weakness of the accommodation resulting from disease, as after diphtheria, scarlatina, measles, or after hæmorrhage, and also glaucoma. Hypermetropia, if present, must be recognized, as it, also, indirectly, affects the near-point.

"The term presbyopia is, therefore, to be restricted to the condition in which, *as the result of the increase of years*, the range of accommodation is diminished, and the *vision of near objects* is interfered with."

As the diminution of the accommodation has been going on from an early period of life, the question naturally suggests itself, when shall it be considered that the defect called presbyopia begins? In the case of emmetropia, it might be said to commence when, from the cause mentioned, a person begins to have difficulty in reading or sewing, or the like near work, at the distance to which he has previously been accustomed, but finds it easier when the work is farther off. Donders defines it to begin in emmetropia when the binocular near-point is as far off as 8 inches. We must distinguish between the near-point and the reading distance. The latter must, of course, be farther off (if there is any extent of range of accommodation at all) than the near-point, for the effort of accommodation cannot be maintained for a long time at its maximum.

Donders measures the amount of the presbyopia by the lens-interval, to use such an expression, between the binocular near-point and the point 8 inches distant from the eye; that is, the lens which would bend rays from a point at 8 inches distance to directions as if they came from the near-point. For instance, suppose the near-point at 12 inches. Then the amount of presbyopia is *conventionally* $\frac{1}{8} - \frac{1}{12}$, equal to $\frac{1}{24}$. As the standard, 8 inches, is arbitrary, this measure of presbyopia is less important than that of the degree of myopia, or of hypermetropia.

With regard to the remedy for presbyopia it consists, as is known, in appropriate convex glasses. We have seen that the selection of the glass must depend in part upon trial. Donders gives in a table "the empirical result: what glasses are required at different ages in emmetropia, with normal acuteness of vision and accommodation, for writing, and for reading ordinary type."

	Focal Distance of Glasses required.				
a	*b*	*c*	*d*	*e*	
Age.	In present E.	In original E.	Distance of Distinct Vision.	R^2	P_2
48	60	60	14	60	10
50	40	40	14	40	12
55	30	28	14	30	12
58	22	20	13	22	12
60	18	16	13	18	12
62	14	12	13	14	12
65	13	10	12	13	11
70	10	7·5	10	10	10
75	9	6·5	9	9	9
78	8	5·5	8	8	8
80	7	4·5	7	7	7

I have written in columns *b* and *c* the focal distance of the glass instead of 1 divided by the focal distance. The numbers in columns *b*, *c*, *d*, and *e*, represent inches. E stands for *emmetropia*; R_2, for distance of *binocular far-point;* P_2, for that of *binocular near-point.*

"This table needs, perhaps, some explanation. Column *b* gives the glasses required for E, proved at the moment; *c* for E in youth, and therefore for H (hypermetropia) acquisita at the time of observation; in both cases the diminished acuteness of vision belonging to the time of life is taken into account; *d* indicates the distance which is preferred for vision with these glasses; *e*, finally, the space through which they admit of acute vision," &c.

It may be noticed that corresponding to the diminished acuteness of vision, the preferred distance of distinct vision with the glasses is 7 inches at 80 years, while it is 14 inches at 48 years. That from 50 to 62 years the binocular near-point with the appropriate glass is 12 inches. That from the age of 70 to that of 80 years, the range of accommodation is reduced to zero.

"The above table holds good for emmetropic individuals. If ametropia be present, it must be taken into account. Therefore, always without exception we should begin by determining the refraction, and at the same time S (the amount of vision)," &c.

"If the eye be emmetropic, the control (the test) is effected with the glasses mentioned above in column *b*; we ascertain at what distance 2 and 2½ (Snellen's letters) are easily and by preference read, and we determine the space of the binocular range of vision by causing the patient to read 1 or 1½ as close as possible, and larger type as far as possible. If we now obtain about the results to be found under *d* and *e* of the table, the glasses will usually answer. If the distance be too short, the margin for distinct vision too small and brought too near the eye, we must try weaker, and in the opposite case, somewhat stronger glasses."

This table is made on the supposition that the accommodation and visual acuteness are normal to the age of the patient. But they might not be so. The accommodation might be less; in such case a different glass from that given in the table would be required for exact focusing on the retina. If the diminished accommodation were connected with active disease of one or both eyes this latter would contra-indicate prolonged use of the eyes, especially on near objects.

Also the vision might be less than normal to the age of the patient. This admits sometimes of being partially remedied by stronger glasses which magnify more. If, however, it were owing to active disease of one or both eyes, this would contra-indicate their prolonged use.

Another variation from the glass of the table might arise from the particular kind of work, which might be very fine and require to be nearer to the eyes. Stronger glasses would then be needed, and to obviate somewhat the strong convergence, they might be combined with prisms with angles outwards. Prisms of not quite 4°, one before each eye, would allow an object, while at 9 inches, to be seen with a convergence to 12 inches; that is, the object might be brought up from 12 inches to 9 inches without increasing the convergence.

Also some work requires a special distance, such as reading at a desk or reading music, where "it is often desirable that spectacles should bring the distance of distinct vision to one and a half or two feet, and therefore weaker glasses are necessary than are given for writing, and particularly for reading."

Donders considers that a *hypermetropic* eye becomes *presbyopic* so soon as *with the use of the glasses which neutralize the hypermetropia* the binocular near-point lies farther off than 8 inches. In such case the two defects must each be corrected.

Myopic eyes are *presbyopic* when the binocular near-point is farther off than 8 inches.

If an eye is myopic, say to the degree $\frac{1}{20}$, it may be regarded, for our present purpose, as though it were emmetropic with a convex glass $\frac{1}{20}$ placed before it (neglecting the distance between the glass and the eye). Such an eye we should expect would not require any correction for its diminishing accommodation till after the time when an emmetropic eye would require glass $\frac{1}{20}$ for its presbyopia, and this time, according to the table, is the age of 59 years. Similarly at a subsequent period, after the myopic eye has become presbyopic, we may first try a glass less by the amount of the myopia than the glass which would suit an emmetropic eye of the same age.

Donders remarks, however:—"Generally speaking, I have found that myopics require convex glasses at a still later period than the degree of M (myopia) should have led me to expect, and that the glasses required for emmetropics admit of a still greater reduction than that indicated by the degree of myopia."

"A UNIQUE CASE OF CONGENITAL MALPOSITION OF THE BLADDER."

This is the extraordinary title of a paper describing what appears to have been a common case of exstrophy or extro-version of the bladder, with an extraordinary operation, an account of which was read at the last semi-annual meeting of the Minnesota State Medical Association, and published in the *Northwestern Medical and Surgical Journal* by Alexander J. Stone, M.D. The condition of the parts did not materially differ from that usually found in the lesion mentioned. There was complete epispadias. In front of the usual situation of the bladder the integument was wanting, and its place was supplied by the posterior wall of the bladder protruded by the pressure of the abdominal viscera behind it. A "pear-shaped" tumor was thus formed, the surface of which was of a "dull red color" and displayed "a few 'threads' of an apparent ropy mucous secretion." But Dr. Stone erroneously supposed he was dealing with an entire bladder; he says:—"I diagnosed the tumor to be the bladder escaped through a fissure in the median line before birth, thinking that as the child grew in size the bladder increased correspondingly, and the fissure had gradually contracted, until it was impossible for the child, by muscular effort, to reduce the hernia so fully as it could immediately after birth." Instead, therefore, of attempting to perform the modern operation of covering the exposed mucous surface by means of cutaneous flaps reflected from the surrounding tissues, and so forming a new anterior wall to the bladder, he seems to have contrived a most extraordinary method of procedure. Always with the belief that he was dealing with the whole bladder instead of its posterior wall only, he cut this away from the anterior abdominal wall, making a large hole into the abdomen, through which the intestines protruded. In a second step of the operation he put this fragment of bladder, with its ureters attached, and from which "the urine was continually running," back into the abdomen among the intestines, and, as a third step, sewed up the abdomen, so that the entire peritoneal cavity was ingeniously transformed into a bladder, the urine bathing the intestines. It is presumed that the artificial bladder, thus lined with a serous membrane, was intended to offset the remarkable anatomical discovery, verified as the writer says by the microscope, that the bladder in this case, before the operation, had a mucous membrane on its external surface? Under these circumstances the child died. The reviewer can only remark, in the words of the author, "without making any comments on the above case, or attempting to theorize, I submit the simple facts of this most unique case to the profession." H. H. A. B.

Reports of Medical Societies.

OBSTETRICAL SOCIETY OF BOSTON. SECRETARY, DAVID F. LINCOLN, M.D.

June 11th, 1870.—The Society met at the house of Dr. Lyman, at 7½, P.M.; the President, Dr. Buckingham, in the chair.

Dr. Reynolds mentioned the case of a woman, who had taken ʒiiss. of fluid extract of ergot, in order to produce abortion. He inquired how much members were in the habit of giving to produce its legitimate effects.

Dr. Cotting formerly gave with good effect the infusion made from one drachm of the fresh powder; a teacup of boiling water was poured over it and let stand a few minutes, the powder settling to the bottom, and the clear liquid was given at one dose. Latterly he had sometimes given a drachm or more of fluid extract, but felt it to be less reliable than the infusion described.

Dr. Buckingham remarked that Dr. Channing used the same amount, but *stirred* the potion, and gave but one-third at once.

Dr. Ayer used to follow Dr. Channing's plan, and got more decided results than from the fluid extract; but now employs the fluid extract, finding it reliable in its effects, and less violent in its action.

Dr. Treadwell related the following case:

A young woman, who had had two or three abortions, attended by severe vomiting, increasing in violence in each instance. A year ago he saw her; she was much prostrated from excessive vomiting. An attempt at abortion had been made three weeks previously. The injection of warm water into the uterus through a catheter brought away the dead ovum at the end of twelve hours. Two months ago, being three months pregnant, and suffering from severe vomiting for six weeks, the prostration had become so extreme that, upon consultation with another gentleman, it was deemed advisable to induce labor. A sound was passed, which effected nothing; warm water was injected without avail. Sea tangle and sponge tents were employed, and, finally, at the end of a week, labor was brought about, but not until the patient had nearly succumbed to the vomiting. The os was dilated with the fingers, it being down to the vulva, and the ovum was removed with placental forceps. Complete relief to vomiting. Ether, given sparingly, quite stopped the uterine contractions.

Dr. Putnam related a case of miscarriage of twins at the 5th month, followed by extreme prostration without hæmorrhage. The patient was of a full habit—the mother of three children. She had miscarried twice within two years; otherwise healthy. Having had a slight "show," was advised to keep perfectly still, and partake moderately of vegetable food only. She remained in bed three weeks; had slight "show" occasionally, but no pain. At this period pains came on; the funis, head and both hands presented. The labor lasted six hours. The next morning, awoke exceedingly prostrated. Very pale; pulse 130–140, scarcely perceptible for three hours; respiration 50. Got brandy and other stimulants, and in the course of the day beef tea and champagne. Thirty-six hours afterwards, uterine pain recurred, and a cylindrical body, 4 inches in length, and ¾ of an inch in diameter, was discharged, which proved to be another placenta and ovum of about six weeks. No hæmorrhage; urine not albuminous.

During the next fortnight, remained feeble; pulse 120–130; respiration 50; mind confused; hallucination, especially on first waking. She gradually but perfectly recovered under full diet of meat and stimulants.

Whatever else may have contributed to the nervous prostration, Dr. Putnam considered the chief cause, in the present instance, to have been the deprivation of animal food in a constitution largely dependent upon it.

Dr. Wellington related two cases of puerperal convulsions, which he had lately seen.

I.—The patient had been twenty hours in convulsions when first seen in consultation. Primipara. Os undilatable, an inch in diameter. Extract of belladonna appeared to be of service in relaxing the os, and delivery was effected by turning. Ether had been freely used without much effect. Patient remained unconscious, and died the next morning. She was very dropsical.

II.—Seventh month. Abdominal pain and vomiting, resulting, as she thought, from eating Norfolk strawberries. Some headache; face and hands swollen; urine albuminous. Vomiting, and pain in abdomen, relieved by a cathartic. Three days after, the headache still remaining, she was seized during the forenoon with convulsions, which continued, at intervals, until 12, P.M., when they ceased. They were much relieved by ether, which was given freely. Urine was muddy, and in amount about twelve ounces in twenty-four hours. No signs of labor. After six days, during which the albuminuria continued, with heaviness, double vision at times, and slight headache, but without labor pains, the membranes were ruptured. Labor came in a few hours, and a living child was born, weighing four pounds. The œdema gradually disappeared, and the urine lost its albumen. A state supervened resembling puerperal mania. There was occasional irrationality, with bad dreams, and delusions having reference to homicide. Patient took no interest in her baby, and once or twice intimated that she thought it her duty to kill it. This state of mind continued three weeks, and was succeeded by an attack of crural phlebitis, from which she slowly recovered.

During the convulsions, she took ten grains of calomel, with sugar, as a cathartic, which salivated her. Subsequently, she had bitartrate of potash, and bromide of potassium. Later, iron was administered. She was a delicate woman, and not a subject for active treatment.

Dr. Putnam. Bleeding would have been useful; pregnant women bear it well. Dr. P. had no doubt that he often prevented miscarriage by venesection to the amount of three or four ounces.

Dr. Lyman would induce labor in such cases, if they had passed the seventh month. Thinks the chances of recovery would be increased by so doing.

Dr. Buckingham had seen recovery take place in a very large majority of his cases of convulsions, associated with albuminuria. He had never had but one case of puerperal mania, with albuminuria; in this case chloral was administered on two successive nights, but the patient was worse on the two mornings after the medicine was given. The relation of anasarca to convulsions was not well understood; if it extended above the waist, the probability of convulsions was very great.

Dr. Cotting presented the following results of experiments made for him by a reliable apothecary, the object being to ascertain the size of the drop of different fluids; the experiment consisted simply in letting thirty drops fall into a minim glass, and measuring the number of minims.

	When dropped from a		
	Shop-bottle.	1 oz. vial.	4 oz. vial.
30 gtt. tinct. opii	= 15 min.	20 min.	15 min.
(2d trial)	= 15 "	15 "	15 "
30 gtt. tr. acon. rad.	= 15 "	17 "	17 "
(2d trial)	= 14 "	12 "	15 "
30 gtt. vin. colch. rad.	= 20 "	20 "	20 "
(2d trial)	= 20 "	20 "	17 "
30 gtt. filt. rain water	= 30 "	30 "	30 "

Dr. Clarke remarked that most minim-measures in this country were more or less inaccurate, but that perfectly accurate ones were to be had from England.

Dr. Reynolds opened the subject of the prevalence of criminal abortion, by describing a recent case in which he had been called upon to save a woman, whose condition had become too critical for the abortionist to manage. It is his belief that the practice prevails to a hundred times the extent that it did thirty years ago. This statement, perhaps, ought to be qualified, by leaving out of consideration the refined and wealthy classes.

Dr. Cotting's views differed from those of Dr. Reynolds. He did not believe there had been much change in this respect within a generation. He thought there were as many women who longed (though in vain) for the legitimate fruit of their marriage, as there were of the class who tried to shirk the necessity of bearing living children.

Dr. Buckingham remarked that the populace seem to have the idea that Simpson's sound *was* designed to procure abortion. He commenced practice in 1844, and during the first two or three years he did not see one twentieth as many cases of intended abortion as he now is accustomed to find in a corresponding number of patients. It was true, he no longer had to treat the poorer class of patients to the same extent as then; but he was sure that at that time it was exceedingly rare to find a Roman Catholic Irish woman who was a strumpet, or who practised intentional abortion, while at the present time neither circumstance was at all uncommon among the same class, within his own observation.

As an illustration of public indifference to the crime of murdering children before birth, Dr. Reynolds had been recommended, by a *woman* who was selling him a "fountain syringe," to buy a certain appendage, as better than another for the purpose of procuring abortion. "But perhaps," added the woman, "you don't approve of that?" The families who resort to this means of preventing conception, or who procure the destruction of infants after conception, are not, in his experience, the vile and degraded, but far oftener prudent and thrifty young people; their excuses for these crimes are, as a rule, utterly frivolous. He believes few persons appreciate the extent to which the conscience of the community has been demoralized by the permitted free sale and the habitual reading of so-called "physiological" books. In his judgment, a woman who has entered into marriage can only demand from her husband kindness, decency and temperance in his relation to her. Thus respected by him, she has no right to resist the birth of children, unless she can show, to the satisfaction of competent medical authority, that she is plainly unable to bear them.

Dr. E. H. Clarke thought the statements so frequently made concerning American women were indiscriminate. In his own experience he had met with women who desired to regulate their diet and habits in such a way as to have *as many healthy children* as possible, but who wished to know what he considered the proper interval, *in their own cases*, at which to bear children. He also was consulted, not infrequently, by young unmarried women who wished to be assured, before marrying, that it was safe and proper for them to bear children; and who said to him that they would refuse to marry, if he gave them a decided negative answer. Such views and conduct he considered to be praiseworthy.

Dr. Reynolds, in reply to Dr. Clarke, did not believe that excluding the cases of evident unfitness for childbearing on account of disease, physicians have, or are ever likely to gain, power to answer such questions as those just described. The very persons whom many a physician would pronounce unsuited to bear or to beget offspring, from hereditary defects of constitution or from acquired feebleness, are in many instances parents of happy and sufficiently healthy children. Moreover, what right has such an adviser or such a parent lightly to value the immortal hopes which the shortest earthly life makes possible, or to overlook the preëminent mental and moral endowments with which Heaven often compensates bodily weakness. Had such a Spartan policy always prevailed, the world would have missed the services of many a great name. Macaulay's birth would perhaps have been interdicted, and very probably Dr. Samuel Johnson's. Carcinoma having appeared in the family of Charles Bonaparte, Napoleon and his gifted brothers and sisters might have fallen under the ban of an intelligent modern reformer. Philip Doddridge, so puny an infant that his chance of life was thought nothing worth, the successor of fifteen dead brothers and sisters, would certainly have been condemned.

Childbearing is always a sore trial. One only thought can make it endurable—that this bitter suffering is not the work of man's tyranny, but was appointed ages since by Him whose love and tenderness know no limits.

Several other gentlemen expressed their belief in the great frequency of criminal abortion at present.

Dr. Clarke admitted that our knowledge of these subjects is still far from perfect. Some things, however, in regard to them, we do know; as, for example, that healthy parents are more likely to have healthy offspring than unhealthy parents; that children with healthy bodies are more likely to have well-balanced minds than those with diseased bodies, &c. More we may learn by diligent observation and study. Such study is certainly our duty. The endeavor to regulate the birth of children, with the object of producing the most perfect offspring, is as commendable in the case of man as in that of the lower animals.

Other gentlemen concurred in his views.

The meeting then adjourned.

Selected Papers.

A NEW VIEW OF THE ORIGIN AND PROPAGATION OF THE VENEREAL DISEASE AND ITS SUCCESSFUL TREATMENT BY INOCULATION WITH VAGINAL DISCHARGE.

Mr. J. Morgan, Surgeon to Westmoreland Lock Hospital, Dublin, expresses some novel views on this subject in a paper published in the No. of the *Dublin Quart. Journ. of Med. Sciences* for August last. These views, he says, are the deductions from 1582 cases observed by him during the last two years in the hospital to which he is attached, and which indicate a new source of contagion from which the usual soft or chancroid venereal sore is derived.

"The discrepancy," he remarks, "among syphilographers as to the variations in the forms of the disease and its after consequences in the male and female, always seemed difficult of explanation, and led me to make a close examination by experiment as to its nature and origin in the patients under my charge at the hospital as compared with male patients met with in private and general hospital practice. I could not fail to observe that in this city, the frequency of chancroid or soft sores in the male uncomplicated with constitutional signs, was excessive in proportion to those cases in the female who suffered from genital sores, while on the other hand the frequency of constitutional symptoms in the female was excessive in proportion to the male."

The frequent coexistence of a vaginal discharge of a muco-purulent form with the earlier stages of constitutional syphilis, he thought afforded some clue to the solution of this question, and led him to make some experiments, the result of which, he thinks, shows "that the product of the vaginal discharge of a patient suffering from syphilitic infection, is a chancroid or soft sore, when the discharge is introduced under the skin or applied to an abraded surface. It is also shown that this sore is propagated as a chancroid or soft sore, and is again (so far as my experiments went) capable of indefinite propagation still as a soft sore or chancroid."

"A more remarkable power," he says, "possessed by this vaginal secretion is the production of a chancroid by inoculation on the patient's own person." * * * * "I have on several occasions taken the secretion as wiped from the os uteri and inoculated unsuccessfully with it, while from the vaginal discharge I have been successful.

"I have inoculated from the vaginal secretion of cases of uterine ulcer and from the ulcers themselves without any result.

"I have also inoculated the gonorrhœal discharge of the male without result.

"In all my inoculations the result has invariably been the characteristic pustule and soft or chancroid sore, capable of reproduction; the question therefore arises, was the original affection a chancroid or soft sore, capable of infecting the system, or a hard sore, which is admittedly so capable; I cannot give any information on the latter point, as unfortunately in the only two cases of hard sore which have been admitted to the hospital during the last eight months I did not inoculate. So as to be capable of transmitting a sore by inoculation from the vaginal secretion it seems necessary that the patient must be suffering from the earlier stages of constitutional infection, whether as yet latent or developed."

The vaginal secretion, Dr. M. states, retains its power of infection for a considerable time after the healing of the primary sore or of the first constitutional evidence.

In all the inoculations made by Mr. M. the product from the artificially generated chancroid was, he stated, a chancroid, though generated from and on syphilitic subjects.

"With regard to the propagative property of the poison in women, it might be supposed that once the sore is healed there is no further danger of a sore being communicated, while even a chancroid, as I believe it might appear in an untainted subject, would be lethal to the system by conveying the syphilitic poison. This error the illustrative cases show fully would be a serious one, as the non-existence of a genital sore in the female is no absolute guarantee of the non-existence of contagion power."

Mr. M. has found the following variations in inoculation with the vaginal discharges:—

"The activity of the discharge seems to vary—thus, immediately before or after the menstrual period it is less active.

"The same discharge would succeed in some cases and not in others, and though failing to produce a specific pustule one day it would not on another.

"As in vaccination, the admixture of a little blood in making the inoculation generally rendered it nugatory.

"The more robust and vigorous the patient, the more perfect was the inoculation, and the more persistent it became, being indeed difficult to heal.

"Every succeeding generation from the vaginal discharge seemed progressively to increase in inoculative power.

"The more infected the recipient the more difficult to inoculate, and the greater the tendency to heal.

"Every succeeding inoculation on the patient's own person seemed to increase in inoculative power."—*American Journal of the Medical Sciences.*

Dr. Brown-Sequard, at the recent meeting of the British Association for the Advancement of Science, showed among other things that epilepsy, traumatically induced in the guinea-pig, could be transmitted to its offspring.—*N. Y. Medical Gazette.*

ON THE APPLICATION OF CARBOLIC ACID AS A LOCAL ANÆSTHETIC IN SURGICAL OPERATIONS.

By J. H. Bill, M.D., Surgeon U. S. Army.

In conducting some investigations on the action, &c., of carbolic acid, the writer has made the following observations, which, as they seem to be of practical importance, he communicates in advance of the other results:—

All who have handled this substance must have noticed the tingling sensation (not unlike that produced by aconite) in the finger tips and other parts touched by the acid, which presently passes into a greater or less anæsthesia. On trying to determine the amount of this anæsthesia with an ordinary æsthesiometer it was found not only impossible to distinguish two points, however widely separated, but even to recognize the presence of one.

The prick of the point was not felt at all as pain, nor was an incision productive of uneasiness. The experiment was, therefore, extended thus: The radial side of the writer's left forearm was covered with a cloth soaked in a saturated solution for half an hour, then a streak was traced over the course of the radial artery with a camel's hair brush dipped in acid liquefied by one-twentieth bulk of water. This streak extended from the styloid process to near the elbow, and after a few minutes was rubbed off. An incision was then made with a common scalpel from a point about two inches above the styloid process towards the internal condyle for five inches, occupying as near as possible the middle of the streak made with the brush, and extending down to the fasciæ investing the flexor muscles (superficial) of the thumb and fingers, so that at its lower extremity the radial artery was exposed and could have been ligated. This incision was unattended with pain, save where nerves distributed to or passing over the muscular fasciæ were pricked or divided, and even in this case the pain was not at all unbearable. *The incision of the integument was painless*, and the writer would have been unconscious of the injury save from the sensation communicated to his hand holding the knife as it was drawn through the tissues. This observation or experiment was made nearly a year ago. It was applied practically at once to all minor cutting operations. The writer has not incised a felon or bubo since without successfully employing this method for preventing or greatly mitigating pain. Many cases could be given, one will suffice. David Harris, of Vancouver, applied with his second finger of the left hand highly inflamed from a felon, the parts much injured by burrowing of pus. A previous felon had been treated on another finger a few months before, and the requisite incision had given him exquisite pain; the patient therefore apprehended great suffering from any operation on the finger now diseased, and begged for chloroform. However, the finger was soaked for fifteen minutes in warm water containing three per cent. of carbolic acid, dried, and then a brush, dipped in the concentrated acid, drawn over the finger in the course of the intended incisions. These, two in number, were then made, using a thin edged scalpel by a slow sawing motion, allowing only the weight of the knife to make the cut. The patient stated that he had suffered no pain, or not more than would have resulted from handling the parts. The parts healed at once. Sometimes it is necessary after making an incision nearly through the integument, if sensibility becomes apparent, to brush out the wound made with some liquefied acid before extending the incision deeper. This was necessary in a palmar abscess treated by this method without pain. The writer has excised a small tumor partly by this plan. Buboes have been operated on painlessly, and, in short, the writer can recommend the plan in any cutting operation where no dissection of the skin is involved, and where all the pain results from the cutting of the skin. It is hoped that it will be of special service to those who are compelled to operate without an assistant. The writer was thus compelled this summer to remove from his right hand, by an incision of over two inches in length, a large wooden splinter which had been thrust through the palmar fasciæ, and had lodged under the tendon of the lumbricalis of the index finger. It was done without pain, save where a nerve was divided. The incision healed without scar.

These facts, which the writer believes he is the first to point out, have theoretical relations of great interest which may be discussed in a future paper.—*American Journal of the Medical Sciences.*

THE ORIGIN OF SPECIFIC DISEASES.

Messrs. Editors,—I hope you will find space in your columns of "Selected Papers" for the extract I send you from a recent letter to the *British Medical Journal* from Dr. Samuel Wilks, Physician to Guy's Hospital, London, on "The Origin of Specific Diseases." Let those who are ever ready to ascribe every outbreak of typhoid, choleraic or other epidemic diseases to supposed or imagined defective drainage, impure water, or foul smells, either or all, as chance may grant, ponder well Dr. Wilks's very sensible suggestions.

Yours, MEDICUS.

"In Prof. Huxley's address at the British Association, on spontaneous generation, he rightly includes in the large field of nature over which he casts his eye some matters pertaining to pathology. His own opinion clearly leans towards the old and prevalent doctrine *Omne vivum ex vivo;* and he endorses by the weight of his name the experiments of Pasteur and his followers. Knowing what the normal mode of production is, he would leave the burden of proof of the spontaneous production of living matter with his opponents; and I think we may be well satisfied to witness it in the hands of such an able 'abiogenist' as Dr. Bastian. Similar arguments the Professor would apply to the case of the contagious or specific diseases; and accordingly the *onus probandi* lies with those who believe that such affections can arise *sui generis.* I cannot at this moment lay my hands on the writings of any author who distinctly asserts the truth of the doctrine; but, judging from the observations of many in our profession, it might be thought that such does extensively prevail. I believe, as regards typhus fever, that an opinion of its spontaneous origin from overcrowding does exist largely amongst medical men; and, as regards scarlatina, the importance attached to bad drainage at Guildford and elsewhere would lead to the belief that not a few in the profession consider that some of the ordinary circumstances around us are sufficient to develope it. If I remember rightly, this was asserted in a public paper by a surgeon at Croydon, who stated that he had seen the disease arise in an isolated cottage, and induced by a neighboring cesspool or dunghill. Even syphilis, I have heard stated by two gentlemen examined at the Admiralty Committee, will spring up spontaneously from promiscuous sexual intercourse. I do not know that any medical man has assented to the strongly expressed opinion of Miss Nightingale, that smallpox can arise from bad sanitary arrangements.*

"Let us see what are the arguments for the existence of a specific poison in this class of diseases. The term poison is used, because a person affected with a specific contagious disease has that in his system which, if transplanted, will produce in another as certain and definite effects as if the latter had swallowed an animal or a vegetable poison. At well defined periods, results are seen in the body so characteristic that the nature of the infecting cause is at once recognized. Seeing that the matter or blood from a variolous or a scarlatinal patient is capable of producing exactly the same effects in a healthy person, we must feel sure that a something having specific qualities has been conveyed from the one to the other. Whether this something will be found to consist of living germs, as Dr. Burdon Sanderson's observations tend to show, is now a question of opinion; but there are many who think that the day will shortly come when we shall be capable of seeing the typhine or cholerine enclosed in a bottle. In the case of every weed found in a newly made garden, we believe that the seed was first implanted there; and so, from all analogy, we consider that in every instance of a specific disease a microzyme must have been introduced from an extraneous source. Dr. Huxley evidently thinks that the analogy holds good; and thus we should be content to rest upon the conviction that, in every case of so-called specific disease, the complaint has been 'caught'; and, if we are not able to prove it, we ought to assume it, and let the *onus probandi* lie with those who deny it. Since all reasoning would lead us to assume the origin of living matter from germs, we are content to believe in the commonly accepted parentage of all animal and vegetable forms which surround us. That they ever have any other origin, or can arise spontaneously, must be shown to be true by those who have reason not to be satisfied with the current opinion. So it rests with the abiogenist in our profession, or the man who believes in the spontaneous origin of scarlatina or such like disease, to act with as much care as Dr. Bastian has done, and be sure, when he thinks he sees an example of the complaint spontaneously arising, that every possible source of contagion has been excluded. Until he shows this, the universally contagious theory must still be held. The question, then, of the spontaneous origin of the usually called specific contagious diseases ought to be no more an open one than the more general *questio vexata* of spontaneous generation. As regards the latter, the world is content to hold a certain opinion until it be found to be false; and so in like manner the medical profession may safely hold to the idea of only one parentage of the exanthemata and other specific diseases, until facts are forthcoming to prove their spontaneous growth. If the analogy holds good (and I believe it does) between these diseases and the phenomena of animal and vegetable life, we must assume that in every instance the complaint has been 'caught'; and we shall be then in a better position to discover what we understand by the influence of bad drainage and other defective sanitary arrangements."

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* "I was brought up both by scientific men and ignorant women distinctly to believe that smallpox, for instance, was a thing of which there was once a first specimen in the world, which went on propagating itself in a perpetual chain of descent, just as much as that there was a first dog (or a first pair of dogs), and that smallpox would not begin itself any more than a new dog would begin without there having been a parent dog. Since then, I have seen with my eyes and smelt with my nose smallpox growing up in first specimens, either in close rooms or in overcrowded wards, where it could not by any possibility have been 'caught,' but must have begun. Nay, more, I have seen diseases begin, grow up, and pass into one another. Now dogs do not pass into cats."—*Notes on Nursing.*

Bibliographical Notices.

The Physician's Prescription Record, * * * *with Forms for Record of the Condition of the Patient and copy of Prescription.* Philadelphia: S. W. Butler, M.D. 1870.

Dr. Butler has put into handy form an idea which doubtless has puzzled many a member of the profession, viz., a method of retaining a copy of every prescription given in the course of his daily visits. A bound volume, which is sold at one dollar, contains 400 blanks, each of which can be used as a daily record of the prominent symptoms of the patient visited; in addition, a blank prescription paper is attached, punched around its edges, so as to be easily detached, and a space below suffices for a copy of the same. In fact, the prescription book of Dr. Butler is a good thing and will be useful to many.

It is a matter of importance to preserve *every* prescription which is written. It may be desirable to use the same form of medicine at months' or years' interval; it may be essential for reference in case of legal proceedings; or it may be found useful in drawing up the history of a case. At any rate, if a physician keeps no case book, he should at least keep a prescription record. If it becomes necessary to remember the prescriptions and copy them at home, they will practically never be copied; if they are to be copied from one slip of paper to another, they will surely be lost; but if physicians oblige themselves to *make up* their prescriptions, with all the mistakes and the calculations which may be necessary, on the retained portion, and then copy them fairly on the paper which is given the patient, only under such circumstances will the majority keep copies of their prescriptions.

We consider the form of Dr. Butler a very excellent one; yet we have ourselves long used a similar, but as we think, much more handy form, in which we can copy the recipe and all other notes on a retained "stub" for future reference.

Prescription and Clinic Record. Sixth Edition. New York: W. Wood & Co.

A record book of similar character to that of Dr. Butler has been sent us by the publishers. In addition to the conveniences afforded by the former, this publication embraces a number of tables of more or less clinical value.

Physician's Visiting List for 1871. Philadelphia: Lindsay & Blakiston.

We welcome once more our little pocket companion for the year. We could not be without it; for it is not only a constant reminder of our daily duties, but, in addition, furnishes opportunity for those professional memoranda which are essentials in every one's practice. It is for sale by A. Williams & Co., 135 Washington St.

Archives of Science and Transactions of the Orleans County Society of Natural Sciences. Newport, Vt.: J. M. Currier, M.D.

A quarterly journal of science with the above title was commenced in July last. The first number has found its way to our office, and we find it filled with articles interesting alike to the ethnologist and the lovers of general science. "It is designed to make it a storehouse of original articles in every branch of science, and especially a registry of original researches in scientific matters in Vermont." We shall quote from its pages as opportunity offers.

Sir Francis Crossly, an English millionnaire, has given £200,000 to certain medical charities, with the singular condition that it shall be perpetually invested in United States securities.—*Med. Record.*

Medical and Surgical Journal.

BOSTON: THURSDAY, DECEMBER 1, 1870.

THE ANGLO-AMERICAN AMBULANCE IN THE EUROPEAN WAR.

SOME weeks ago we published portions of a letter, from Drs. Evans and Crane, on the organization of the American Ambulance. We had hoped to give our readers occasional information of the operations of this Society; the exigencies of the war, however, have shut us off from communication with either of these gentlemen, and the information we have been able to glean is but fragmentary. We are glad, however, to find in the Medical Times and Gazette reports from Drs. Sims and McCormac, from which we make extracts.

"The Anglo-American Ambulance has a little history of its own. The Americans in Paris appointed a committee at the beginning of the war to organize an ambulance. This committee invited me to select a staff of American Surgeons for this purpose. I accepted the invitation and organized the staff. When we reported ourselves ready to go forward to the seat of war, the committee suggested that we should set up our tents in Paris, and await the coming of the Prussians. The Surgeons unanimously opposed this proposition, insisting that our organization was for the purpose of giving aid and succor to the sick and wounded on or near the field of battle. The committee was obstinate—the surgeons no less determined—hence a split, and the American Surgeons dissolved their relations with the American committee, and formed a union with Dr. McCormac, Dr. Frank, Dr. W. Webb, and other English friends, under the title of the Anglo-American Ambulance. We then went to the French Société de Sécours aux Blessés, in the Champs Elysées, where our services were at once accepted." * * * * *

"I was made Surgeon-in-Chief, and Dr. McCormac was placed next in command. Dr. W. Webb was *comptable*, which includes the functions of commissary and paymaster. Thus organized, we left Paris on Sunday night, August 28th, with orders to report at Mézières. We arrived there on Monday night, and on Tuesday, the 30th, we came to Sedan, where we found the Caserne d'Asfeld already converted into a Hospital, which the mayor gladly turned over to our use, and we took possession of it on the 31st. We had barely entered its grounds when the roar of cannon announced the battle of that date. At night most of us repaired to the battle-field; many of the wounded were transported to our Hospital at Sedan, but many more, too severely wounded to be transported, were housed in the village of Balan. Several urgent operations were performed that night by McCormac and Frank."

The good fortune which placed Dr. Sims in charge of the Hospital at Sedan enabled the Anglo-American Ambulance to render services, such as no other ambulance in either army had been in a position to perform during the war. The number of patients treated by them was 1193; of these the total number of deaths was 117. Considering the circumstances under which they were placed, Dr. McCormac thinks, and justly, as we believe, that this death rate is small. He attributes the good results obtained to open windows, and the liberal use of carbolic acid. Of the number of deaths, 30 patients succumbed to pyæmia.

Dr. Sims says, "Without invading the province of Dr. McCormac's report, I may mention the fact that we never used the tourniquet at all; hence our patients lost but little blood during operations, and we never had a case of secondary hæmorrhage, which is remarkable, considering the number of operations, and the seeming haste with which they were sometimes done." * * *

"Free ventilation by open windows is not the plan in general use in French Hospitals. About ten days after the battle of the 1st, all the ambulances and Hospitals in Sedan and its neighborhood were visited and inspected by a committee of French Surgeons. As they entered ward No. 1, in our Hospital, they saw twenty-four poor wounded soldiers, twelve on each side, the windows at each end of the ward widely open, with the wind blowing freshly through. They stopped a moment, looked a little surprised, shuddered, but said nothing. On entering ward No. 2, they found the same state of things, and immediately called out "*fermez les fenêtres.*" It was explained to them that our only hope of preventing purulent infection was free ventilation. They declared that we would endanger the lives of our patients by the *courants d'air*, which would produce pneumonia and local congestions. As each of us held such opposite views on the subject of ventilation, under existing circumstances, the inspection here ended, and the high officials turned and retraced their steps.

"We have had several cases of tetanus (six or seven), and it at one time occurred to me that our free ventilation might have predisposed to it. But, on inquiry, I find that it was relatively more frequent in other ambulances, both French and German, than it was in ours, and I am now satisfied that our open windows had no special influence in producing it."

Dr. McCormac speaks of the kindly and harmonious feeling existing throughout the corps, and, though over-tasked, and exposed to the privations which so many of our own number remember as consequent on life in the field, they accomplished a large amount of earnest work in the cause of humanity.

Referring to Dr. Marion Sims, he says:—
"I cannot sufficiently express my recognition of the active, invaluable assistance rendered by Dr. Sims. He was little short of omnipresent, and his thoughtful, kindly counsel was appreciated, as it ought to be, by everyone."

PERSONALITIES OF MEDICAL JOURNALISM.

Many of our readers have undoubtedly heard that the London *Lancet*, during its early history, adopted a system of deliberate personal abuse for the purpose of increasing its circulation. The following paragraph is from a paper entitled "Autobiographical Recollections of the Profession, by J. F. Clarke, M.R.C.S.; for nearly forty years on the Editorial Staff of the *Lancet*," and recently published in the London Medical Times and Gazette.

"The Medical press was, previous to the establishment of the *Lancet*, conducted, at all events, with a gentlemanly spirit, and with becoming deference to professional opinions and views. It was in many instances tame, but, as a rule, not ill-informed and had scrupulously avoided all *personal* matters. Such a thing as a nickname was unheard of. It remained for the *Lancet* to introduce into medical journalism an element which has caused more heart-burning and quarrels than any other could possibly have done. This was the system of personal attack and calling of nicknames. * *

"Not satisfied with criticizing in no friendly spirit the doings and writings of eminent men, he (Wakley) attacked them personally: called hospital surgeons "bats" and Scotch doctors "dubs." He abused them in a spirit of ridicule, and often attached nicknames to them which were galling and offensive. One was an "owl," another a "cock sparrow," another an "oyster," and so on; indeed, these are among the mildest of the nicknames used. The adjectives employed were often of the most offensive kind. In short, the *Lancet*, as the representative of medical literature, was sunk so low that it was only to be classed with the very lowest of the political prints of the day. At this time the medical press had obtained an unenviable notoriety for its personal abuse, and the low morals which it manifested. * * *

"How far ridicule and satire are fair weapons of offence and defence in public questions is a point I shall not undertake to decide. They are powerful agents, no one will deny; but they ought to be handled by a master. Compare the attacks of Junius, or even of Wilkes, with those of Cobbett and Wakley—what a difference!"

Superiority of American Surgery.—We make two extracts from the columns of *The Nation:* one from the letter of an American Surgeon, now at the seat of war in Europe; the other from the editorial columns. Our own careful observation, three years ago, warrants us in confirming the views expressed:

You will perhaps allow me a few words on German operative surgery and surgical appliances as compared with those of our own country. The Germans are pre-eminent in deep investigation, skilful theorizing, and thorough information; but I endeavor to be perfectly candid when I say I have seen nothing which led me to think less highly of the surgeons and the surgery of America. One who has seen and studied practical surgery in any of the chief American cities will look in vain for the order, the skilful manipulation, the rapidity and brilliancy to which he is accustomed at home; and these are not compensated for by any diminution of the sufferings of the patient or increase in his safety. The operating-room, during the performance of an operation, is a sort of Babel. The preliminaries do not seem to have been arranged, the instruments are beyond the reach of the operator, and no one person is charged with the duty of handing them. When he calls for an instrument, several of the bystanders simultaneously attempt to comply with his request. Those who look on discuss the various steps freely and in loud tones, and offer any suggestions that occur to them. Their instruments, though made of far finer material than we get in America, are clumsy in appearance and construction, and awkward for the hand. The American models of the more common instruments exceed them by far in elegance and neatness. They know little concerning many convenient, ingenious, and tidy contrivances which are considered indispensable in England and America; and it is amusing to see the lofty indifference with which they listen to any suggestion of the possibility of methods or apparatus superior to their own; for there is in the average German disposition the least perceptible leaning toward illiberality when other countries, as compared with Germany, are in discussion. A comparison of the hospital wards of the two countries in the respects of convenience, neatness, and order, would result favorably, I am certain, for America. Indeed, they concern themselves little about externals in surgical matters, while these necessarily engage the first attention of the observer; and for this reason this first impression is the most unfavorable; yet, if one looks more closely and studies a little deeper he finds that the essentials are never neglected, and that the *results* are perhaps all that could be expected."

"The letter of an American surgeon, which we print elsewhere, is in the line of other testimony from abroad as to the superiority of American surgery. An eminent professor in Dublin, some time ago, referred to the reports of several successful cases of amputation of the hip-joint, published by our War Department, in a specimen number of a projected 'Medical and Surgical History of the War,' and then quoting from McLeod's 'Surgical History of the Crimean War,' in which there was not a single successful case of this character, paid a glowing compliment to the boldness and skill of American operators. Professor Billroth, the first surgeon and pathologist of Vienna, in a late lecture to his class, when speaking of œsophagotomy (cutting open the œsophagus for the removal of a foreign body), said it was an operation which had never yet been successfully performed. But the next day, having been shown authentic reports of several cases in which the operation had been performed by Dr. Cheever, of Boston, with complete success, he publicly took back what he had said, and stated what had been done by the Boston surgeon, adding, 'here again, gentlemen, we are indebted to our American brethren for important advances in our profession.' When Professors Gross and Pancoast visited Berlin, a short time since, they were received with the most distinguished respect and hospitality. The former was introduced by Professor Virchow to the class, and consulted with in regard to an operation by Professor Langenbeck; the latter was urged by Professor Graefe to operate on some eye-cases, in order to give the students an opportunity of witnessing the different methods. His operation for the resection of the trifacial nerve excited much admiration."

Explosive Bullets.—The contributor to the *Times* of the 4th inst., who described the experiments lately tried in Messrs. Winckley and Shaw's yard, Blackfriars, for the purpose of comparing the results of explosive and plain bullets, observes that "humanity forbids killing when wounding would answer the purpose. Explosive bullets of small size are considered to be as barbarous as killing the unresisting wounded." There is, however, another view of the question which presents the use of such missiles in an impolitic light, and which may probably afford a stronger motive than even humanity dictates for not employing them. "Dead men tell no tales," and dead men require no ambulance, hospital treatment, or food. The wounded, after an engagement, who must either be carried off the field or left to fall into the hands of the enemy, contribute one of the greatest causes of anxiety and embarrassment to the commander of an army either in retreat or advance, of which source of solicitude he would be entirely relieved were each bullet on reaching its "billet" to produce a fatal result. So that the use of explosive bullets on both sides, although immensely and unnecessarily increasing the loss of life, might actually aid towards the movements of the enemy.

Four experimental shots were fired from an ordinary revolver by Mr. Adams on the occasion referred to. 1. An explosive bullet was discharged into the head of a horse. Complete death was instantaneous. There was only one report, but a little blue smoke curled out of the wound. The bones of the head were shattered; the brain was utterly destroyed, presenting merely a disorganized pulp; and where the bullet lodged at the back of the head there was a cavity seven inches long by six inches broad. 2. Another horse was killed by a plain bullet in the head. The bones were not shattered, and the brain was comparatively uninjured; and, although the animal dropped immediately, the subsequent quivering of the limbs showed that death was not so instantaneous as it had been in the other instance. 3. An explosive bullet was discharged into the thorax of a dead horse. From the wound itself there was no smoke, but, on the chest being cut open, a considerable quantity issued forth. The bullet penetrated and shattered one of the ribs, and lodged in the opposite side, having produced immense laceration of lung tissue. The fourth experiment showed the comminuting effect of an explosive bullet when fired against bone. M. Purtuiset, a Frenchman, has devised the explosive powder, of which the composition, we understand, is not yet known; he claims for it perfect safety in use, but practical men are inclined to think that extensive experiments will be necessary to establish this point. Sportsmen in India have, we know, been for some years past in the habit of using, for large game, a conical bullet, hollow at the apex, and charged with a mixture of equal parts of chlorate of potass and black sulphuret of antimony. The effects have been described to us as having been very similar to those observed in the experiments above noticed.—*London Med. Times and Gazette.*

THERAPEUTICAL ACTION OF COLD AFFUSIONS IN TYPHOID FEVER.—M. De Lambert, who has lately written at length on this subject, has arrived at the following conclusions:—

1. Cold affusions are especially advantageous in typhoid, and the eruptive fevers.

2. They act on the principal and most constant phenomenon in these diseases, namely, the elevation of the temperature by diminishing it. They are, consequently, in the highest degree, anti-pyretic. They bring down the temperature from 0·5° to 3·0° (centigrade).

3. They favor the restoration of a full, deep, and regular respiration.

4. They stimulate the peripheral circulation by strong and rhythmical contractions of the capillary vessels, contractions caused by reflex action.

5. They stimulate all the physiological secretions.

6. They restore to the skin its suppleness, its moisture, and its healthy color.

7. They, in general, favor the appearance of the eruption, and recall it when it has disappeared.

8. They calm cerebral agitation in awaking activity of the cerebral circulation; they suppress delirium, coma, and lessen prostration.

9. They cause a general feeling of comfort, which allows the patient to sleep quietly.

10. They diminish the frequency of the pulse by 8 to 20 or 30 beats.

11. They relieve headache.

12. Their anti-pyretic action lasts from two to six or eight hours.

13. They should, as a rule, be repeated from two to four times in twenty-four hours.

14. They are specially indicated in the severe cases of typhoid fever, or of one of the malignant eruptive fevers.

15. They do not influence the duration of these diseases, but render them lighter, or lessen their severity.

16. They are not indicated in all cases of these diseases without exception; they do not, therefore, constitute a general method of treatment to the exclusion of all other concomitant therapeutical means.

17. They may be advantageously associated with application of cold bandages, or with the employment of cold lotion.

18. Their application is easy, and is not attended by untoward results to the patient.

19. Their methodical and rational employment is based on the principles of clinical physiology.—*Med. Press & Circular.*

TRANSFIXION OF THE RIGHT SIDE OF THE CHEST BY A LANCE.—There is now a patient at the Royal Victoria Hospital, Netley, laboring under aortic disease, who has recently recovered from the following remarkable lance-wound. He is a soldier of the 5th Royal Irish Lancers, and, on the 1st of April, 1869, at Lucknow, was mounting his horse, when the animal reared on its hind legs. The butt of the lance was thrown forward and touched the ground, while the point of the weapon, unobserved by the man, was brought opposite to the lower part of the right side of the chest. Under these circumstances the horse plunged forward, and the lance passed through the chest. The point entered over the cartilage of the 7th rib, and came out, together with 22 inches of the shaft, through the fossa infra-spinata of the scapula, one inch and a quarter from its vertebral margin, and an inch and a half below the spine of the bone. No sooner had this occurred, than the horse bolted, and it was not until he had gone about 120 yards, that the man, grasping the lance with his right hand to take the drag off the chest, and reining up the animal with his left hand, was able to bring him to a standstill. As soon as the horse stopped, the man threw himself off, and in the act of falling to the ground the lance became partially broken or split up at the part which was close to the front wall of the chest. This added to the difficulty of extraction. The lower heavy part of the lance was first sawn off, and then about twenty inches of the part protruding beyond the scapula; the part within the chest was subsequently withdrawn by the aid of strong pincers. There was not much hæmorrhage, and the man made an excellent recovery. The right side of the chest expands well, and, with the exception of loss of respiratory murmur and increased resonance over a limited space about the wound of entrance, the chest-sounds on this side are normal. The heart-disease was first noticed while he was under treatment for the wound just described. The length of the lance used by the 5th Lancers is nine feet three inches, and its weight is four pounds and a half.—*British Med. Journal.*

On the Movements of the Intestines.—In order to investigate the movements of the intestines, MM. Legros et Onimus employed a sound to the extremity of which a caoutchouc ball was attached. This was introduced through an intestinal or gastric fistula, and the movements of the alimentary canal, at the point where the ball was situated, rendered legible by a manometer to which a graphic apparatus was attached. In the majority of cases the ball was introduced through a small opening in the abdominal wall, but in some cases the intestine was exposed. In the former case the ball was subjected to the pressure of the abdominal walls and the diaphragm, the latter exhibiting itself in the form of regular respiratory variations of pressure, which were easily recognizable from the much slower variation in pressure produced by the peristaltic action of the intestine itself. For the purpose of producing electrical excitation of the gut, wires were so connected with the sound that the caoutchouc ball lay between the opposite electrodes, or the current was passed from the fistulous orifice to the trachea, or in the opposite direction to the anus, according to whether the ball was placed in the upper or lower section of the intestine. In similar manner the spinal cord, splanchnic nerves and mesenteric nerves were excited. The following general conclusions were arrived at. Contractions occurred at regular intervals, propagated peristaltically, or rarely anti-peristaltically, which were interrupted from time to time by long periods of rest. Still more rarely, a certain portion of the canal became contracted. Contractions succeeded to one another more rapidly at the upper extremity of the intestine than at the lower. The movements of the large intestine are different in degree, duration and form from those of the small intestine. The movements of the stomach are not so regular and uniform as those of the intestine, and those of the pylorus differ in their characters from those of the cardiac extremity. Suppression of the current of arterial blood increases the activity of the peristaltic movements; but this effect is not produced by interruption of the venous current. The passage of induction currents conducted immediately through the gut causes contraction at the point where the electrodes are applied, but relaxation in the interspace between them. Constant currents cause the peristaltic movements to cease, and occasion diminished pressure (i. e., relaxation) on the caoutchouc ball, when they are passed in the normal direction of the movements; but when passed in the opposite direction they produce augmented pressure (i. e., contraction) on the ball. Irritation of the spinal cord by means of a constant current causes at first a few movements to occur, followed by a quiescence. Excitation of the splanchnic nerves with induction currents increases the tension of the air in the caoutchouc ball, but induces no movements; the application of constant currents occasions peristaltic movements. Similar excitation applied to the mesenteric nerves is followed by the same result. Excitation of the central extremity of the vagus divided in the neck stops in the intestinal movements, and diminishes the tension. Excitation of the peripheric extremity is followed by no effect. Constant currents applied to the vagus scarcely have any influence on the intestine, but stop all movements of the stomach. Mechanical excitation applied immediately to the gut causes relaxation, which is followed by vigorous contraction. Ice-water causes contraction; warm water, or solution of common salt, increases the activity of the movements, as do also croton oil, ipecacuanha, the small doses of atropia; morphia renders them slower. Strychnia causes contraction of the intestine coincidently with the general convulsions.—*Lancet.*

ALTERATION IN THE URINE FROM THE USE OF CARBOLIC ACID. BY J. A. WALDENSTRÖM.—Although this remedy has for a long time been used at the Academical Hospital in all forms of suppuration, with a view to checking decomposition of the pus, in three cases only did the urine exhibit any change which could be ascribed to the action of the carbolic acid. The first patient came in with a gangrenous phlegmon in the entire of the right leg. The largest portion of the skin and subcutaneous areolar tissue had sloughed away, so that it was possible to see the soleus muscle almost from its origin to its insertion. To arrest decomposition of the pus, the diseased bone inside the moist warm dressing was enveloped with a piece of lint dipped in the ordinary carbolic acid oil. In consequence of the nature of the affection, and of the patient's advanced age, the prognosis was very bad, and when, after the lapse of eight days, simultaneously with the complete separation of the dead areolar tissue, the urine assumed a dark-red color, the case was regarded as hopeless. It was reasonable to suppose that the change in color had its origin in a resolution of the blood, but, notwithstanding the employment of all the chemical reagents, its presence could not be detected in the urine, which was clear and of a strongly acid reaction. On Professor Almén, who kept the urine for closer examination, informing me that it contained carbolic acid in large quantity, I intermitted the use of the solution of the acid in question for a day, when the urine resumed its normal appearance; but as soon as the carbolic acid was again employed, the dark-red color returned. The advantage of employing carbolic acid (for preventing decomposition of the pus, and so the occurrence of septicæmia), and the possible injury from it (in producing a nephritis) made me doubtful whether I should desist from the use of it, or not. However, it was tried for some days longer, but the pieces of lint were first wrung out in a dry towel before they were laid upon the sore, and as soon as this precautionary measure was adopted, the urine preserved its normal color.

The second patient resembled the one just spoken of in every particular, not only as regarded the seat of the complaint and its extent, but also in respect to the behavior of the urine in relation to the greater or less quantity of carbolic acid which was used in the dressing. The third case was a middle-aged woman, with a very extensive periostitis in the right thigh. The pus that escaped on incision was thin, blood-colored, and easily underwent decomposition. The suppuration in the large cavity was profuse and of a fœtid character. With a view to check decomposition of the pus, as much as two tea-spoonfuls of a solution in oil of the acid was one day injected into the cavity, the latter having been previously rinsed out with water containing carbolic acid. The consequence was, the next day the urine possessed a tarry color. Some days later, when the urine had regained its usual appearance, the same injection was repeated with a precisely similar result. The urine was then more closely examined and was found to contain both albumen and the coloring matter of the blood. The latter had already disappeared next day, but the albumen continued, although in small quantity, for a few days. Death occurred as a consequence of septicæmia. A similar transitory presence of albumen in the urine was also observed in a patient who used carbolic acid internally for a syphilitic cutaneous eruption.

From what has been stated we see then that carbolic acid is not as harmless as it is often represented to be. Separated by the kidneys, it acts as an irritant on these organs and may give occasion either to an hyperæmia alone, or to a parenchymatous inflammation, which is not an unimportant complication of the other affections, even if they are not so serious. Neumann's investigations on the action of carbolic acid on dogs poisoned therewith, also show that a considerable fatty degeneration in combination with a molecular breaking-up of the cells of the liver, hyperæmia of the kidneys with a turbidity and separation of the epithelium in the urinary passages are the changes constantly met with on *post-mortem* examination.

This obliges us to take the greatest precautions in the use, whether internal or external, of carbolic acid, and frequently to examine the urine in order to be able instantly to withhold it on the occurrence of a state of renal irritation. In solution in oil, too, carbolic acid appears to be more readily absorbed than in an aqueous solution, so that we should, in affections such as the two first brought forward, where the acid comes into direct contact with a large granulating surface, prefer the latter form to the former in using it; unless it be made weaker than usually employed (one part in six to eight).

The cause of this altered color of the urine, which is met with only in the external use of the remedy, we do not know with certainty, but it probably depends on the presence of some unknown oxidized products of carbolic acid. It may be assumed that this oxidation takes place prior to the absorption of the acid, because, otherwise, we should find the alteration in color of the urine in cases of its internal use also.—*Med. Press and Circular.*

DECOMPOSITION OF CHLOROFORM. By E. C. A. BILTZ, of Erfurt.—The assertion of Dr. Hager (this Journal, page 319) that chloroform prepared from pure chloral hydrate, is not decomposed by light and air, is not correct. This so-called normal *chloroform is decomposed as readily as any other if it be absolutely free from alcohol.*

From ½ kilogramme of pure chloral hydrate I obtained 296 grm. chloroform, sp. gr. 1.498 at 15° C. (the theoretical yield is 306 grm., sp. gr. 1·502); it was very pure, entirely indifferent to sulphuric acid, but still contained some alcohol, to remove which it had to be washed six times with water. It was then dehydrated and rectified, when it had the sp. gr. 1·5019 at 15° C., a boiling point of 62·27° C., and was entirely indifferent to iodide of potassium. Exposed in a half filled white vial to the daylight, it showed, after ten hours, a reddish tinge with solution of iodide of potassium.[*] On the evening of the second day strong decomposition of this solution, and so on as previously described by me.[†]

This proves that chloroform prepared from chloral hydrate is prone to decomposition. How the stability of Hager's chloroform agrees with its sp. gr. and boiling point I am unable to say; however, he might have satisfied himself by comparative experiments, that his tests for alcohol, in this case, are partly entirely useless, partly very difficult. Lieben's excellent test (iodoform) is the only one which, with the aid of the microscope, approaches mine[‡] in delicacy; all others indicate at best ½ per cent., while in our case ⅛ per cent. and even less is of importance. I do not doubt, therefore, that Hager's chloroform still contains such traces of alcohol, and that it will yet decompose in the course of time.

I would again refer to my former paper on this subject, particularly to the proof that the officinal chloroform does not contain sufficient alcohol to prevent its decomposition. The final sentence in Hager's paper (p. 319 of this Journal) must, therefore, be rejected. As long as the officinal chloroform does not contain at least 2 to 3 per cent. of alcohol it must be kept and dispensed in black bottles, to guard against gradual decomposition in the light. And this is not altered in the least by preparing the chloroform from chloral.—*Pharm. Zeitung*, from *American Journal of Pharmacy.*

MARRIAGE AMONG PHTHISICAL PATIENTS.—Dr. Hartsen has published, in Virchow's *Archiv*, (vol. 49, 1870), an article in which he brings forward various arguments wherewith he seeks to prove that marriage should not be given up by persons affected with phthisis pulmonalis. Upon this Virchow himself steps forward, and refutes, *seriatim*, the reasoning of Dr. Hartsen. He contends that young consumptive men have been known to die a few months after marriage; that tubercles, with them, develop rapidly in the testes, vas deferens, and prostate gland; that the issue will undoubtedly suffer from phthisis; that consumptive women are placed in similarly unfavorable circumstances; and that we are no more justified in advising marriage to phthisical patients than to those who carry in their organism the germ of insanity.—*London Lancet.*

INCOMPATIBILITY OF QUININE AND VERATRUM VIRIDE.—Dr. Bradly, of St. Mary's, Ohio, reports, that when a patient is under the influence of veratrum viride, it is highly dangerous to administer quinine. The effects are most alarming: immediate sinking and irregularity of the pulse, which, in some instances, reaches collapse. He ran great risk of losing three patients before he became aware of the actual cause.—*The Cincinnati Lancet and Observer.*

STEAMBOAT AMBULANCES ON THE RHINE.—Ten steamboats are on service as floating ambulances on the Rhine, from Mannheim to Dusseldorf. The Geneva flag floats at the topmast of each. The wounded are better located in these floating hospitals than they were before; but there is a want of medical aid in them.—*Medical Record.*

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[*] 1 absolutely neutral iodide in 20 water, freshly prepared.

[†] See Archiv der Pharmacie, 1868, June, 209.

[‡] 1 p. bichromate of potassa in 2000 water, mixed with one-eighth of its volume sulphuric acid. One volume of chloroform is well agitated with half a vol. of this mixture and set aside over night; disappearance of the yellow color proves the presence of alcohol.

Medical Miscellany.

MEDICAL BENEVOLENCE.—Our cotemporary, the *Medical Times*, is in error in stating that the "New York Physicians' Aid Association" is the only one in this country having for its object the distribution of charity to needy members of the profession and their families. The Massachusetts Medical Benevolent Society was formed in 1857, and has been in successful operation ever since. It now numbers about 140 members. Any Fellow of the Massachusetts Medical Society in good standing may become a member on receiving the approval of the Council.

WE are glad to welcome home again our old friend, Dr. Bowditch. His visit, he assures us, has been one of great pleasure. He passed most of his time abroad in the study of sanitary science, especially in reference to the condition of tenement houses, the sewage question and other matters, all of which he will present to the public in the report of the State Board of Health.

HOSPITAL APPOINTMENT.—Dr. O. F. Wadsworth was appointed Associate Ophthalmic Surgeon of the City Hospital at a recent meeting of the Trustees of that institution.

MEDICAL STUDENTS will notice that after Dec. 1 the time for Dr. Blake's lectures on the Anatomy and Diseases of the Ear will be changed from Tuesday to Friday at 9 o'clock.

COMPULSORY VACCINATION.—The Dublin *Medical Press and Circular* relates the case of a clergyman who was charged, at the Preston Police Court, on behalf of the Board of Guardians, with refusing to have a child vaccinated. The refusal was persisted in, because that some years before the defendant had lost a child by death after vaccination; and a neighbor's child, who was vaccinated with virus from his own, had also died. Similar facts, he stated, had also come to his knowledge; and he feared a like result would follow vaccination in this case. The bench decided that, the law being explicit, it was incumbent upon them to enforce it, but the penalty, under the circumstances, would be limited to a fine of 1*s*. and in default the defendant to be imprisoned one day. The reverend defendant declined to pay.

HICCOUGH.—Some time ago, under the title of "Sneezing," we published a very simple method of controlling it, by pressure upon the upper lip. We are glad to learn from so many different sources the success attendant upon our annotation. A correspondent directs our attention to the subject of hiccough—a most distressing and obstinate complaint to those in whom it occurs. We do not refer, of course, to the hiccough attendant upon great prostration of the system, and met in connection with *delirium*, or convulsions, or to hiccough the effect of debauchery, but to those instances, very frequent indeed, of a simple spasmodic condition of stomach and œsophagus which assails the individual without any other symptom of disease, and in the treatment of which antispasmodics prove inert. Our correspondent tells us that for a long term of years he has been invariably successful in affording relief to his patients by directing them to hold their arms straight above the head, and to keep inspiring as long as is feasible, so as to retain the air in the lungs for as long a period as possible. He considers the oxygen of the air acts as a stimulus in provoking the paroxysms, and that the carbonic acid in the unexpired air acts as a sedative in warding off the hiccough.—*Med. Press & Circular.*

NEW PIGMENT IN BILE.—According to the *American Chemist*, M. Ritter has obtained a new coloring matter from the bile. This is a blue pigment which is insoluble in chloroform and acids, and to some extent resembles indigo. It is obtained from bile by first filtering it and next shaking it with chloroform. The solution thus obtained is next treated with a weak solution of caustic soda; and after having been neutralized with hydrochloric acid, applied in slight excess, the acid solution will contain the blue matter in a state of suspension.—*Mich. Univ. Med. Journal.*

TO CORRESPONDENTS.—Communications accepted:—Case of Empyema.—Foreign Bodies in the Air-Passages.

PAMPHLETS RECEIVED.—Transactions of the New Hampshire Medical Society (Eightieth Anniversary), held at Concord, June 21 and 22, 1870. Pp. 96.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending Nov. 26, 1870.

Cities and towns.	Total.	Prevalent Diseases	
		Consumption.	Typhoid Fever.
Boston . . .	108	20	2
Charlestown	9	2	0
Worcester .	16	2	3
Lowell . . .	19	5	2
Milford . . .	1	0	1
Chelsea . . .	4	1	0
Cambridge .	11	0	2
Salem	8	2	0
Lawrence . .	6	0	2
Lynn	11	3	1
Pittsfield . .	3	0	0
Fitchburg . .	8	1	0
Newburyport	5	0	0
Somerville . .	5	1	0
Fall River .	10	7	0
Haverhill . .	7	1	1
Holyoke. . .	7	1	1
	238	46	15

From all the above-named places there are reported fourteen deaths from pneumonia, twelve from croup and diphtheria, and eleven from scarlet fever. Holyoke reports four deaths from smallpox during the past two weeks.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, Nov. 26th, 108. Males, 52; females, 56. Accident, 6—apoplexy, 1—inflammation of the bowels, 1—disease of bladder, 1—congestion of the brain, 1—disease of brain, 4—burned, 1—cancer, 1—"congestion," 1—cerebro-spinal meningitis, 1—croup, 3—cyanosis, 2—cholera infantum, 1—consumption, 20—convulsions, 3—debility, 1—diarrhœa, 2—dropsy 2—dropsy of brain, 2—diphtheria, 2—erysipelas, 2—scarlet fever, 4—typhoid fever, 2—disease of heart, 1—indigestion, 1—infantile, 4—disease of the kidneys, 2—laryngitis, 2—congestion of the lungs, 3—inflammation of the lungs, 5—marasmus, 5—mortification, 1—neuralgia, 1—old age, 5—paralysis, 5—premature birth, 1—peritonitis, 1—puerperal disease, 1—unkn'wn, 6.

Under 5 years of age, 32—between 5 and 20 years, 10—between 20 and 40 years, 13—between 40 and 60 years, 27—above 60 years, 16. Born in the United States, 77—Ireland, 27—other places, 4.

THE

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NEW SERIES.] THURSDAY, DECEMBER 8, 1870. [VOL. VI.—No. 23.

Original Communications.

DELAYED SYMPTOMS AFTER INJURY TO THE HEAD.

By S. G. WEBBER, M.D.

THE length of time which may elapse after an accident before cerebral symptoms set in, is a point in prognosis worthy of notice. Generally, if the injury is severe, a series of phenomena commences immediately, and there can be no doubt as to the connection between the accident and the symptoms. Occasionally an interval of time intervenes, and it may not be so easy to decide whether the symptoms coming on several days or weeks after the reception of an injury are due to it or have arisen independently.

Generally, perhaps always, if the truth could be known, it would be found that the period of incubation, if it might be so called, is not entirely devoid of symptoms; a slight headache, vertigo on stooping, or perhaps a scarcely perceptible change in behavior or character, might be found if inquired after. These symptoms are, however, so unimportant in the opinion of the patient as not to be noticed, and unless direct questions are asked on these points they will not be known. With children, it may be impossible to learn whether such symptoms exist, and it is therefore important to be the more guarded in expressing an opinion as to the termination of the case.

The following cases illustrate the points to which reference has been made:

CASE I.—I was called, in January, 1870, to see a boy, about 5 years old, who had a fit. In November, of the previous year, he fell quite a distance from a sky-light to one of the landings, nearly twenty feet.

He was supposed to have struck his right thigh, and possibly his head. The thigh was bruised and tender, and he walked lame, and complained of his hip. He was nauseated for a few days after, and perhaps complained a little of his head, but not much. He played about as usual, and it could only be noticed that he was more excited and nervous than previous to the fall, and also was easily frightened. Otherwise, there were no symptoms following the injury, except that referable to the hip. A short time before I saw him, he was standing at the window, and suddenly, without warning, screamed loudly, lost consciousness, vomited, became stiff and slightly convulsed. When seen, he was lying on his back on a sofa, seeming to notice nothing, a slight amount of froth at the mouth, the muscles rather stiff, but there were no convulsions. He tried to vomit once. Ether was given by inhalation, and after a few whiffs he made motion to get away, crawling over to the other side of the bed, on which he had been placed. He would not talk nor recognize anyone. Enough ether was given to produce partial insensibility, and he was left to sleep. It was then learned that the previous evening he had eaten some canned peaches, which had fermented. The diagnosis under such circumstances was rather doubtful, but naturally the error in diet was considered as probably the cause of the fit. The prognosis necessarily depended upon the diagnosis. There was, however, a possibility of a connection between the fall and the fit, and therefore the chances in favor of recovery were not so favorable as they otherwise would have been.

The boy slept for a while, and then awoke apparently well. The father told me afterwards that the next time he urinated he suffered severely, crying out with the pain, but not losing consciousness. He was subsequently under the care of Dr. Bundy, who had previously attended the family, and from him I learned that cerebral symptoms appeared, and the child died, having apparently cerebral meningitis.

I was asked to examine the body after death. The head was the only part examined. The only disease found was inflammation of the meninges. There was a deposit of lymph covering the pia mater, limited to the right side, chiefly about the fissure of Sylvius and the fissure of Rolando, not extending beyond the median line, nor into the longitudinal fissure. The lymph was chiefly deposited on the convex surface, and but very little at the base; the extreme anterior and posterior portions of the hemisphere were free. The vessels of the pia mater were a little fuller than usual. The cerebral substance was not materially changed, not softened, and there were no signs of contusion nor hæmorrhage into its substance.

In view of the limitation of the inflammation to that part of the right side of the head which was struck, it is reasonable to suppose that this lesion was caused by the fall, although there was an interval of two months between that event and the appearance of the first marked symptom.

CASE II.—Henry B——, seaman on the United States Steamer Rhode Island, æt. 28, during March, 1863, while in the West Indies, received a blow on his head from a marline-spike, which fell from the fore-top. His head was bruised, and he had some headache at the time. April 1st, 1863, he found it difficult to speak; his tongue was inclined to the right side when protruded; he complained of headache. His hair was cut off, a blister applied, and counter-irritation was kept up. He improved so much as to be able to go to duty on April 13th.

April 21st, he appeared again, complaining of headache, and spoke with difficulty. Counter-irritation was renewed. There was no sensible improvement, and May 3d, he was sent North to hospital.

These are the only notes preserved of this case. As I remember the case, there was little or no inconvenience during several days between the reception of the blow and April first, when he applied for medical advice; the headache, which immediately followed the blow, not continuing long of sufficient intensity to make him refrain from duty. Probably, between April 13th and 21st, there were some remains of abnormal symptoms, which his pride, as a seaman, led him to disregard.

The following case is from a little work by Bryant:

CASE III.—"Arthur B——, æt. 3, was admitted into Guy's Hospital in July, 1860, under the care of Mr. Birkett, but the treatment of the case fell into my hands. Shortly before admission, the child had fallen from a window, eight or ten feet high, pitching upon his head. He was taken up hastily, and brought to Guy's, when he became conscious, presented no external signs of injury, and no symptom of cerebral mischief could be detected. He was placed in a bed, and ordered to be kept quiet, as a precautionary measure, and everything went on well till the third day, when fever appeared, accompanied with vomiting, unconsciousness, and the peculiar scream so characteristic of cerebral irritation. The head was tilted back upon the spine, and the pupils were dilated." Under treatment he recovered.*

The following case, translated from the German, illustrates, even better than the preceding, the very serious results which may follow an injury, though at the time there is nothing in particular to attract the attention.

CASE IV.—G. B. von R——, 29 years old, was received into the institution in February, 1858. There was unmistakable hereditary tendency to psychical disease. He had enjoyed good health, and was well developed. He had indulged in sexual excesses and masturbation. He had been married five years, was temperate in eating and drinking. In May, 1857, slight cerebral disturbance was caused by a blow from a carriage over the left parietal bone. In July, of the same year, he became irritable, passionate, violent, capricious, at the same time indifferent to surroundings, negligent in business. A week later, there was rapid loss of memory, especially for recent events; increasing thoughtlessness and wandering were seen in talking and writing. Finally, he could no longer form a single sentence, or add a simple column of figures, and he complained of his increasing mental weakness. There appeared, in October, a maniacal excitement in the form of purposeless, senseless activity, seeking after new projects, and a desire for travelling. At the same time, appeared motor disturbance (staggering gait, trembling, great muscular weakness), delirium with exaggerated ideas, which soon took enormous dimensions, and a consideble increase of sexual desire. * * * * * * During the spring of 1858, he improved considerably, and went home, having, however, still slight mental weakness, and slight motor disturbance. The improvement continued until the end of 1860. Increasing weakness of memory, absentmindedness, and imbecility, brought him back in February, 1861. In May, of the same year, he left, improved; he lived apathetic, imbecile and paralyzed till the spring of 1863, having many apoplectic attacks, meanwhile, in one of which in May he died.

The autopsy revealed the following interesting appearance:—

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* The Surgical Diseases of Children. Thomas Bryant. London, 1863, p. 59.

The skull was difficult to saw; diploë unusually dense, almost free of blood. On the left parietal eminence was a nearly circular spot, about 1½ centimetres in diameter, over which the periosteum was very firmly adherent. Opposite this, the parietal bone was bent in, seemingly uniformly, like a sort of flat funnel. It was formed of compact, pale masses of bone, and was covered with many fine-pointed spicula of bone. The whole strikingly resembled an opening made by a trephine, which had been closed up by callus.

At the above mentioned spot, the inner side of the calvaria was adherent to the dura mater by a firm membrane, which could be torn from the dura mater. From this place, extending towards the median line, the membrane was opaque, thickened, and very resistent. About half a pint of reddish serum escaped when the dura mater was cut. In the longitudinal sinus were coagula. In the opaque and thickened spot of the dura mater, just opposite the left parietal eminence, and near the falciform sinus, stuck fast two irregular sequestra of the inner table. The points of these penetrated the membrane inwards. At this spot, especially in the course of the great veins, the arachnoid and pia mater were very dull, and covered with numerous pacchionian granulations. The vessels of the pia were swollen with blood; the pia was easily separated from the convolutions; only along the longitudinal sinus on both sides was the gray substance adherent. The remainder of the brain showed no change from the normal condition, according to the report of the autopsy.[*]

In the same monograph are several cases of a similar character. In one, a stable-servant, jumping from a wagon, struck his head against the wheel. For ten days, no symptoms were present, except some headache, and he kept at work. After ten days, he became restless and sleepless, and subsequently had mental disturbance and paralysis, and died in about one year.

Since commencing this article, I have seen a report of a case by Dr. Gibson, in the Edinburgh Medical Journal, September, 1870, which is of interest. A man, about sixty years old, was found in a state of coma, and in two days he died. There was no mark of contusion or violence on the body, but the left parietal bone was extensively fractured, without depression, and the left hemisphere was covered with a thick layer of firmly coagulated blood, which proceeded from the middle meningeal artery and the contiguous portion of the dura mater. It was learned subsequently that three days before that on which he was found, he had fallen down a long flight of stone steps, and was severely stunned. He soon recovered, and went about as usual, though somewhat confused, and complaining of his head now and then.

These cases are all of such a nature that there can be no doubt that the injury played an important part as cause of the lesion which followed. Occasionally, others occur, which give rise to a doubt as to how far the injury has acted as a cause. These are always of a more chronic character, and the cerebral disturbance often shows itself in one of the forms of insanity. If several years have passed in comparative health after the accident, it may be difficult at first to establish the connection between the two. Cases of epilepsy are sometimes of this nature. It is particularly important, under such circumstances, to inquire minutely into the history of the patient, to learn his intellectual power, and his disposition and character previous to the injury; to discover whether there has been any change, whether he has become, during the interal of apparevnt health, irritable, morose, unkind, or whether the opposite is true, and he has become more gentle and quiet; whether there has been any loss of mental power, or a condition of restless activity and sleeplessness; whether there has been an increased tendency to congestion of the head; in short, the most trivial and seemingly unimportant particulars are to be investigated. If any change has been noticed, the date of its commencement must be fixed; not the date at which it became so marked as no longer to be concealed, but the time when the earliest and scarcely perceptible change occurred. It may be found that this change was coincident with the receipt of the injury, and the diagnosis is then easier.

With all the care possible there will be cases where a doubt arises as to the extent to which the previous injury has served as cause of the subsequent condition. It is often such cases which come into court for adjustment of damages, wherein doctors, lawyers, judges and juries, have scope for the exhibition of skill, rhetoric and patience. In such cases, frequently, the chief question is, as to how far emotional and slight psychical changes, which incapacitate for the continuance of one's ordinary occupation, are due to the accident, and to what extent the damages should be assessed. This is a branch of the question which it is not intended to pursue.

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[*] Ueber die durch Gehirnerschütterung und Kopfverletzung hervorgerufenen psychischen Krankheiten. Dr. R. v. Krafft-Ebing. Erlangen. 1868. P. 20.

SIMPLE METHOD OF MEASURING THE SPECIFIC GRAVITY OF SMALL QUANTITIES OF URINE.

Mr. Editor,—We not unfrequently see, in an otherwise complete report of the condition of a specimen of urine, "quantity too small for the specific gravity to be measured," or words of similar import. A simple method has occurred to me by which the specific gravity of an extremely small quantity of urine may be obtained with sufficient accuracy for all practical purposes.

Suppose the quantity to be examined is half a fluid ounce. Add to this, say four times its bulk, or two fluid ounces of water, and take the specific gravity of the mixture. Suppose this to be 1004; the specific gravity of the urine will be 1020. The reason of this will be obvious; for we have in the mixture four parts of water at 1000, and one of urine for the fifth, to which any surplus above 1000 belongs; of course, if the water were replaced by an equal quantity of the urine, four other volumes of the surplus specific gravity would be added, and the specific gravity of the whole would be five times as great. Hence the following rule:—

Add to the quantity of urine to be examined as many equal volumes of water as may be necessary to float the scale of the urinometer. Multiply the excess of the specific gravity of the mixture above 1000 by the whole number of volumes employed, add it to 1000, and the result will be the specific gravity of the urine.

So simple a method as this can hardly fail to have occurred to many persons who have been engaged in examining urine, but I do not happen to have seen it mentioned in any of the books at hand, perhaps for this very reason. On the other hand, I have so often known the important fact of the specific gravity to be left out of a report on a specimen of urine for the want of enough to fill the urinometer, that the simple rule above given may not be without value to some of your readers. S. L. A.

ON THE GELSEMINUM SEMPERVIRENS.

By E. P. Hurd, M.D., Newburyport, Mass.

The yellow jessamine is becoming favorably known among regular practitioners. First brought into notice by the Eclectics, it has been proved to possess properties which render it of great value as a medicinal agent.

Having been in the habit, for some time, of using a tincture of the root in my practice, I can from experience speak confidently in its favor. I believe that, as a cardiac sedative, we have not its equal in the whole range of the materia medica. It relieves in a marked manner the shortness of breath and palpitations of all forms of heart disease. I have seen more prompt and decided benefit from its use in chronic valvular disease, than from digitalis. The dose may be three drops of the saturated tincture every two, three or four hours. A patient with aortic regurgitant disease, has been taking, for more than a week, three drops of the tincture every two hours. The relief from dyspnœa and palpitation has been wonderful. It sometimes produces a little giddiness or nausea; these are the only unpleasant symptoms from its use. There is a marked contrast between the present ease and comfort which the patient experiences, and her uneasiness and distress previous to commencing the remedy. The gelseminum is combined with Hoffmann's anodyne and tincture of lavender. The gelseminum is believed to have a specific effect on the vaso-motor nerves, stimulating them, and thus equalizing the circulation and lessening the labor of the heart. It also allays nervous irritability. I could wish that those of my *confrères* who have never used the jessamine would give it a trial. I believe it surer than veratrum or prussic acid, and safer than digitalis.

The Eclectics rely much on the yellow jessamine as a febrifuge. They give it in all acute sthenic febrile diseases where the antiphlogistic treatment is indicated. I question, however, whether as a febrifuge it has any advantage over veratrum viride, which is now so popular a remedy.

King, in his Materia Medica, speaks highly of the tincture of gelseminum as a relaxant in rigidity of the os, puerperal convulsions and dysmenorrhœa. The dose in such cases would be large.

The yellow jessamine is a native of the Southern States, where it is much cultivated as an ornamental vine. It has fine yellow flowers, smooth stem, and opposite, perennial entire leaves, growing on short petioles. The root is the officinal part. The active principle is probably its alkaloid, gelseminia.

DEATH FROM THE EFFECTS OF SULPHURIC ETHER [IN AN OVERDOSE.—Ed.].

By Walter Burnham, M.D., of Lowell, Mass.

In the autumn of 1862, after a severe skirmish, I was directed by a regimental surgeon, who was my superior officer, to administer sulphuric ether to one of his men, who had been wounded on the previous day, for the purpose of an amputation of the thigh just above the knee.

The wound was produced by a minié ball from the rifle of a sharpshooter, hid in the top of a tree. The soldier, at the time, was mounted and his foot was in the stirrup, with his knee bent upon the thigh. The ball struck him just above the patella, and passed through the condyles and out at the popliteal space, dividing the bloodvessels and nerve.

The assistant surgeon, who stood almost at his side, at once filled the wound with persulphate of iron and lint, and secured it with a tight bandage. The hæmorrhage ceased immediately, so that the bandage was scarcely stained. The patient was then taken directly to the regimental hospital, about one mile distant, where he had good care till the next morning; he was then placed upon the operating table in order to have his limb amputated.

He was a stout-built German and could not speak English, so I could not converse with him; but he was reported to have rested well during the night with a single Dover's powder; his countenance looked well, his pulse was full and strong, not above 80 per minute. He had no symptoms which indicated exhaustion or severe shock from the wound.

I have been thus particular in my description of him that the profession may judge correctly of the cause of his death. I should also remark that his heart was observed to act with great uniformity and strength during the whole night, and that he slept more than is common after such injuries. It was also noted that he had no symptoms of shock to the nervous system. Indeed, no fears were entertained of the slightest danger when he was brought into the operating room.

After the usual preparation for operating, I commenced giving him sulphuric ether (under a protest as to my preference, for I always use chloroform) with the same care and precaution which I always exercise in the use of chloroform; to wit, I placed a small napkin in a bowl to cover the face, and held it so that it could not touch the face or mouth, and poured about an ounce of ether upon the napkin, adding one or two drachms of ether every two or three minutes. It required, in my judgment, about ten (10) minutes to render him entirely insensible, which corresponded with his respiration and pulse. I then said to the surgeon that he was ready for the operation, and at the same time removed the bowl from his face. The tourniquet, which had previously been loosely applied, was then tightened; at the same time the patient appeared to be recovering from his state of anæsthesia, and the surgeon manifested some impatience that I had not continued to keep it to his face, declaring that there was no danger from the ether. But it required only a few seconds to restore complete anæsthesia, and the operation was at once commenced. I again removed the ether from his face, which the surgeon noticed and impatiently ordered me to renew it. I re-applied the napkin, with a drachm of ether freshly poured upon it. After one or two inspirations, the patient ceased to breathe, and I raised the napkin from his face. The surgeon reproved me for not *obeying* his *orders*, and again ordered me to "crowd that ether." I told him the man was not breathing well; but this increased his impatience. I told my superior I would give *ether* if he would make the man *breathe*, but that he was *dead*. He then, after I had stepped back, saw that I was correct, and softened down and said, "Dr., you are right."

The surgeon had not applied the saw nor finished the use of the knife when death took place. There was no hæmorrhage, or any other apparent reason for his death; but very soon after he began to inhale the ether his pulse was noticed to grow feeble by Dr. Bancroft, who was with me and called my attention to it; but the patient died so soon after, I did not examine the pulse afterwards.

The surgeon, believing that sulphuric ether could not produce death, was unwilling to admit that it was due to that cause in this case; yet he said he "did not see what else caused it," for he had seen no signs of anything like shock since the patient came into the hospital.

I have had a very large experience in the use of anæsthetics, but mostly with chloroform, and have seen many cases of suspended animation from both articles, and have used more than one hundred (100) pounds of chloroform; but this is the only case of fatal termination that I have ever witnessed. Yet I cannot perceive that there was any other cause connected with this death than the effects of ether. And this was owing, in my opinion, to an idiosyncrasy which could not previously have been discovered. With the experience which I have had, ever since the use of anæsthetics, I cannot be charged in this case with being careless or overdosing.

[*Qui facit per alium facit per se.* Did not the surgeon, who ordered the renewal of the etherization, *overdose?*

We print the preceding with only this brief comment. We ask the advocates of chloroform in all candor whether this case were one of death from the *use* or the *abuse* of ether? If Dr. B. had had the sole charge of the case instead of being controlled by superior authority, would not the patient have revived when Dr. B., perceiving labored respiration, withdrew the anæsthetic? Was not the surgeon who ordered the prolongation of etherization under the circumstances responsible for the result? And mark this! Is not *death* too often the *first* sign of *suffering* from *chloroform* inhalation? The difference between ether and chloroform is this. With the former, when the respiration fails, stop the inhalation and the patient invariably revives—with the latter, do precisely the same and *sometimes* he does not.—Ed.]

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY. REPORTED BY F. W. DRAPER, M.D., BOSTON.

The Society met Saturday evening, October 29th, Dr. George C. Shattuck, the President, in the chair.

Dr. Cutter exhibited and described a vaginometer of his own invention, and read a paper detailing its uses. It consisted of a rod of the size of the ordinary uterine sound, at the extremity of which was a horizontal bar, about three-quarters of an inch long. By the combination of two of these with a hinge, a pelvimeter was practicable.

Dr. F. H. Brown spoke of the bedstead employed at The Children's Hospital, and exhibited the system of extension used at that institution for diseases and injuries of the lower extremities. The bedstead is one of the Tucker pattern, and is so made that the top of the mattress is at an elevation of 30 inches from the floor. By this increase of height over the bedsteads usually employed in hospitals, the care and dressing of patients, especially of children, are much facilitated.

The extension apparatus is intended to take the place of the more complicated and more expensive means usually employed for this purpose; it can be made by any carpenter, and adjusted to any iron bedstead having a footpiece; by a single movement it is attached to the bedstead, and as easily removed. It consists simply of a block of black walnut, supported from the upper rail of the bedstead by two hooks, resting against two of the perpendicular bars, and bearing on its under surface the pulley which carries the cord and weight.

Dr. Webber exhibited a specimen of typhoid ulceration of the small intestine, and read notes of the history of the case. The patient was sick twenty-six days; he entered the hospital after a week of diarrhœa and general malaise. He had worked previously about a wharf in this city. During the period of his sickness in the hospital, he had the various symptoms of typhoid fever—diarrhœa, gurgling in the right iliac fossa, insomnia and delirium; the fever, however, was complicated by certain thoracic symptoms, whose true import was not diagnosticated before death, one of the noteworthy anomalies being a marked irregularity in the rhythm and force of the respiratory movements.

The autopsy discovered the lesions of pleuritis, three pints of serum being removed from the left pleural cavity. The liver and spleen were enlarged in moderate degree. Nearly all of Peyer's patches presented ulcerations; in some, the mucous coat of the intestine only being eroded; in others, the muscular coat being invaded, while in a few the ulcer had penetrated to the serous layer without perforation.

Dr. Jackson observed that the marked discoloration of the ulcerations nearest the ileo-cœcal valve indicated comparatively a longer duration; he deemed it impossible, however, to form an absolute opinion as to the period of the disease from the mere physical appearances of the ulcerations. He thought, moreover, that two data should, if possible, be ascertained in determining the history of any case—the time the patient ceased from work, and the day he took his bed.

Dr. Abbot suggested that the case was apparently an illustration of the etiology of typhoid fever in exposure to foul emanations, and farther exemplified the theory by cases in his own practice. He cited one case as originating in continued exposure to the foul air of a cesspool while it was being emptied by the city workmen.

Dr. Jackson mentioned cases in his knowledge exemplifying the same fact. He characterized the method of evacuating cesspools, at present practised in open day, as an abomination deserving the attention of the Board of Health.

Dr. Abbot said the blame belonged not to the Board of Consulting Physicians, but was due to the apathy of the city authorities.

Dr. Shattuck remarked that many cases of typhoid were occurring this season, with marked absence of abdominal symptoms.

Several members of the Society corroborated this observation.

Dr. Jackson thought gurgling in the abdomen, and especially in the right iliac fossa, received, as a general rule, more importance as a symptom than it deserved. He remarked, moreover, that complications in typhoid fever were rare, and the intervention of pleuritis, in the present case, was an anomaly. He further observed that the spleen, although subject to enlargement in this disease, generally recovers its normal size if the disease continues a considerable time.

Dr. Shattuck pointed out the occasional remarkable similarity in the respiration of typhoid fever and of meningitis.

Dr. Jackson had observed the same fact, and thought the resemblance was not an infrequent source of error in diagnosis.

Dr. Lyman raised the question whether with typhoid fever should be classed what is ordinarily known as "slow" fever, or what the older authorities characterized as "nervous" fever.

Dr. Knight thought the two fevers possessed distinctive characters.

Dr. Jackson would class both together. The cases called "slow" fever or continued fever were not fatal as a rule, and hence there was no opportunity to determine the extent of the characteristic anatomical appearances. The mildness or severity of the symptoms was not an absolute criterion by which to judge of the extent of those anatomical changes. He had once made the autopsy of a young girl who, during her sickness, had been dressed daily, so mild were her symptoms; she died from sudden hæmorrhage of the bowels, and after death the small intestine was found extensively ulcerated.

Dr. Webber thought it a point of practical importance to avow to the friends of the patient, in such cases, the diagnosis of typhoid fever, and thus secure the absolute rest which is so necessary in treatment.

Dr. Lyman said these were cases which always gave him anxiety, since the danger of intestinal hæmorrhage was never to be forgotten.

Dr. John Homans remarked that the lesion of the intestines was the real starting point from which to determine the typhoid character, and as it had been shown to exist in the few fatal cases of slow fever, he considered the proof of the difference of type rested with those who did not include the two in one class.

Dr. F. H. Brown exhibited a series of micro-photographs, prepared by Dr. J. J. Woodward, of Washington, D. C., and showing the microscopical anatomy of the capillaries.

Dr. J. C. Warren explained the method of preparing these specimens, the injection of a solution of nitrate of silver and subsequent exposure to light.

Dr. John Homans reported a case of chronic synovitis of the knee, of three months' duration, treated successfully by evacuating the joint by a fine trochar and afterwards painting the skin with tincture of iodine. [This case was published in the Journal, Dec. 1, p. 354.]

Dr. G. W. Gay had tapped the knee-joint and then injected tincture of iodine, but without good result.

Dr. E. H. Stevens read notes of five cases of disease which a coroner's jury, summoned to investigate the causes of the sudden death of four of them, pronounced to be congestive bilious fever of a malignant type. They were all colored seamen; they were attacked almost simultaneously while at an ill-kept boarding house, after returning from sea-voyages. The disease was characterized by vomiting, extreme prostration, marked febrile action, and active delirium. Death was sudden, occurring in from twelve hours to two days. In the single case which recovered, there was opisthotonos, stupor, deafness, loss of memory; and a number of small papules, as of ecchymosis, were observed on the skin.

Dr. Lyman suggested cerebro-spinal meningitis as the true diagnosis, and remarked, further, that the limitation of the disease as to locality and the choice of its victims was characteristic.

The Society adjourned.

Selected Papers.

SOME ANOMALIES AND COMPLICATIONS OF SCARLET FEVER.

Notes of a Clinical Lecture by Prof. OPPOLZER, Professor of Medicine in the University of Vienna.

IN no disease do we meet with symptoms more anomalous than in scarlet fever. The intense fever which generally ushers in the eruption may be very slight or altogether absent, or sometimes gastric symptoms, as foul tongue, nausea, vomiting, may be the only forerunners of the disease, or a severe protracted angina may precede the eruption, which may after all be only partial, of pale red color, of short duration, and followed by only slight scaling. Scarlet fever *without eruption* is very rare, though the skin symptoms may be so slight as to be overlooked, and the true nature of the disease only suspected from after symptoms.

A more serious form of scarlet fever is that in which the fever sets in with severe headache and delirium, and is accompanied with great prostration, diarrhœa, and bloody stools, meteorismus, dry tongue, &c. The eruption is imperfectly developed, lasts a short time, and then recedes, and the whole form of the disease corresponds more with typhoid than scarlet fever. In more malignant cases a dusky discoloration takes place in various parts of the body, with petechiæ and ecchymoses, while hæmorrhages from the nose, mouth, bladder and rectum, are not uncommon. Such cases may be rapidly fatal. A low type of inflammation of the mucous membrane of the throat occurs in many epidemics. In such case, either before or during the eruption of the exanthem, the mucous membrane of the pharynx swells, the tonsils and uvula become enormously enlarged, the throat is narrowed, swallowing becomes impossible, and fluids regurgitate through the nose—morbid changes which may lead to extensive gangrene and death.

In many cases the inflammation terminates in profuse suppuration. The mucous membranes become covered with a dirty purulent exudation; extensive ulceration follows. The ulcers become covered with pus and the detritus of the tissue around, which give a most offensive odor to the breath. The inflammation extends to the glands of the neck and the lymphatics beneath the lower jaw, which become enormously swollen. If the character of the epidemic be malignant, then swellings may rapidly suppurate, open, and involve a large destruction of surrounding tissue. In many cases, especially in children, these symptoms are accompanied by convulsions, coma, a very small, weak, thready pulse, and death in a few days. In more favorable cases the swelling subsides, and the ulcers heal.

In severe epidemics the inflammation of the mucous membranes may assume a diphtheritic type and extend over the nares. The fever is then very intense, and of a *typhoid* character. The mucous membrane of the throat and mouth is covered with a diphtheritic membrane, with profuse serous very offensive discharge from the nose. The false membranous exudation quickly breaks down, and intense head symptoms—headache, coma, convulsions—set in. Inflammation of the salivary glands, and the lymphatics in the neck, with inflammation of the cellular tissue of the neck, is observed more frequently in scarlet fever than in any other febrile disease; generally the eruption is full, and the fever runs high. Not unfrequently extensive and diffuse inflammation of the cellular tissue and glands in different parts of the surface of the body occurs; and this may assume a most dangerous form if the inflammation involves the more internal parts; for instance, the structures behind the pharynx. Oppolzer has seen many cases of retropharyngeal abscess obstructing the gullet, and preventing the patient from swallowing. In one case there was extensive sloughing of the cellular tissue of the right inguinal region in a boy twelve years of age, leading to erosion of the bloodvessel, and hæmorrhage.

But affection of the kidneys is the most frequent complication of scarlet fever. It may occur either early or late in the course of the complaint; and generally leads to anasarca or dropsy, usually about the third week of the disease. Nephritis may come on very slowly and gradually, and is *sometimes* only recognizable by careful examination of the urine.

In other cases nephritis ensues with high fever, great debility, vomiting, and sometimes diarrhœa. The lumbar region becomes tender; the urine scanty, cloudy, brown-red, and containing red blood-cells; its specific gravity generally high, and containing albumen in greater or less quantity. Characteristic of the complaint is the appearance of casts of the kidney tubes. But there are cases in which the first symptoms of nephritis occur *in the beginning of* *the complaint*, and only a few days after the eruption, though the urine is neither diminished, nor yet contains blood or albumen. Affection of the kidneys may result in ascites, anasarca, or serous effusion into the different cavities of the body, or these symptoms may be absent, and the disease show itself by the presence of convulsions, coma, and paralysis, as the consequence of uræmia.

A great difference in the character of the urine is observed *during the development*, and during the course of scarlet fever.

During its development albuminuria very seldom occurs. Yet even then a very careful examination may detect degenerated epithelial cells in considerable quantity with some blood and casts. These symptoms point to catarrhal affection of the urinary tubes, and in a great number of cases are absent. In the clinique, cases have often been observed, in which at the commencement of the disease the urine has been quite clear, and yet, on standing a short time, a soft, opalescent, mucous cloud has formed, which, under the microscope, was found to consist, for the most part, of epithelial cells, and, sooner or later, substances like casts. But *similar* appearances are found in the urine *in other acute diseases*—viz., in pneumonia, meningitis, typhus, acute peri- and endo-carditis, measles, &c.; and, with regard to them, we can only say that, in many acute febrile diseases, a metamorphosis of the tissues of the internal organs takes place, especially of the epithelial cells, which become detached and loosened. This is especially the case with the kidneys. The question is still undecided, whether these deposits in the urine are merely the result of the fever, or are a specific product of the scarlet fever process. But it may be said, in cases where the scarlet fever occurs *without any feverish symptoms*, that these changes are not found in the urine, and are generally absent in slight cases of the malady.

In the case of the boy, aged 10, whose case we have lately observed, a copious urinary deposit was seen during *the first two days of the eruption*, but a microscopical examination gave no result. On the *third* day of the eruption, however, there was observed a mucous clouding of the urine, which, under the microscope, was seen to contain a few cast-like bodies, extremely transparent, and provided with fine grey granules, with isolated cloudy epithelium of the mucous membrane of the tubes. It was curious that in this case distinct traces of albumen were first found on the fifth day of the disease in the form of an opalescent layer, which continued without change, and without increasing, for eleven days. Since then the urine has been quite normal. In this case the fever was severe for two days, and the urinary deposits may have been the consequence of this, and not the result of a specific change.

In cases of scarlet fever in which sooner or later some complication of the kidneys takes place, sensitiveness of the lumbar region is observed: either real pain or tenderness on pressure.

Dropsy.—There is much variation in this symptom. It begins usually in the face and eyelids, and spreads over the whole surface of the body; in the acute cases it reaches a considerable degree, and is accompanied by increased temperature of the skin, but in the more chronic forms of nephritis the dropsy comes on gradually, and is less extensive, the urine of a whitish yellow color, thick, opalescent, and its specific gravity is diminished.

In many cases *serous effusion* takes place into the different cavities of the body; *more rarely* into the interstitial tissue of the lungs, when it may be mistaken for pneumonia. In one case, Oppolzer witnessed an *enormous* œdema of the scrotum, and in another, serous effusion into the tunica vaginalis testis.

Œdema does not occur in all cases of nephritis scarlatinosa with albuminuria; the dropsical symptoms are often absent in very acute cases, but other serious symptoms supervene instead—viz., collapse, nausea, vomiting, coma, convulsions;—symptoms which depend upon uræmia.

In one case only has Oppolzer seen a very rare complication of scarlet fever—namely, *transitory paralysis*—which doubtless depended upon serous effusion into the meninges of the spinal cord.

Serous effusion into the lungs is indicated by severe fits of coughing, dyspnœa, and cyanotic face. The œdema involves a whole lobe, so that the percussion note is dull, and numerous consonant râles are heard. The patient in these cases may die asphyxiated, delirious, or comatose; or the exudation may be absorbed, and recovery take place.

Nephritis is observed *frequently* in some epidemics, *seldom* in others. Sometimes it supervenes with very acute symptoms at quite an early stage.

The *eruption* varies very much. Sometimes the inflammation of the skin is between the cutis and epidermis, and sometimes during the eruption exudation takes place into the cellular tissue of the cutis, causing more or less swelling. In some parts the exudation may collect in considerable quantities, and cause the epidermis to be raised into bladders.

The *blood* in scarlet fever has not been found to differ from the blood in other acute diseases.

The *pathological* changes of the internal organs are very various after scarlet fever. Hyperæmia of the brain and its membranes, and sometimes granulations on the meninges, are found in cases where the head symptoms have been severe. The mucous membrane of the throat, uvula, and tonsils, is usually found ulcerated, sometimes covered with false membranes. The parotid and submaxillary glands with surrounding cellular tissue, are often found swollen, infiltrated, and inflamed; and there is hyperæmia and enlargement of the parenchymatous organs.

If the scarlet fever has been complicated with Bright's disease, œdema of the whole body and serous effusions into the serous cavities are found. The kidneys are hyperæmic and swollen; their cortical substance has a granular look; and in the urinary tubes are found casts and blood, with fatty degeneration of the epithelial cells.—*Medical Times and Gazette.*

Medical and Surgical Journal.

BOSTON: THURSDAY, DECEMBER 8, 1870.

ARSENIC IN THE TREATMENT OF DIABETES.

A NEW remedy for the treatment of diabetes has been introduced in France. In the *Gazette Hebdomadaire* for July 22d, its claims are thus commented on:

"We can now apply to arsenic that which has been said of fire as a therapeutic agent—'It cures what nothing else cures.' It grapples hand to hand with diabetes, and pretends to bring about recovery more surely and more quickly than any other means. Although the merit of its introduction belongs to MM. Devergie and Foville, its first application was the result of chance. A woman, with diabetes, was taking arsenic for the relief of a pruritus of the vulva; and it was observed that both diseases disappeared together. Farther experiments were made on diabetic patients who had no skin diseases, and the same favorable result followed. These results are incontestable, and are worthy the attention of the profession. One observer, in affirming that he has cured by arsenious acid, and properly regulated diet, certain cases of diabetes which were still well nourished, has perhaps indicated the exact limits of the good effects of arsenic. Its utility within these bounds would be easily appreciated. Diabetes does not quickly reach the consumptive stage, and when it has reached that, there is nothing more to be done. Is it not, however, a great gain that an agent is found to arrest, in its early period, this fatal progress?

"How does arsenic act in these cases? The vaso-motor system could hardly fail to answer this query, the restoration of its vitality and a consequent toning of the circulation of the skin being adduced as the mechanism of its action. The observers quoted hold, however, to the verification of the therapeutic facts rather than to their theoretical interpretation. They make use of Fowler's solution, prescribing it in a dose of one drop, morning and night, the first day, and increasing the dose daily by one drop until it is six or seven. This maximum is continued, with an interruption from time to time, and after these short intervals of rest the treatment is resumed with half the last dose. One thing is omitted, however, in their observations—the duration of the treatment. Is the limit indicated by signs of arsenical saturation of the system, or by the disappearance of the sugar from the urine? Is there a chance, by continuing the treatment, of preventing the reappearance of the diabetes? It would have been well to have settled these points beyond a doubt or an uncertainty. Nevertheless, we hail this new remedy with pleasure. Perhaps it might be well, once the therapeutic fact is established, to unite the use of arsenic with animal diet and the alkalies, the two methods which, as palliatives, at least, have given thus far the most favorable results."

RESIGNATION OF CONSULTING PHYSICIANS.

WE are not surprised at the spirited action of three members of the Board of Consulting Physicians of the city of Boston in tendering their resignation of office. It is the natural sequence which might be looked for, when we consider the apathy of the city government in the very essentials of sanitary health. Warning after warning has been uttered by the board without the slightest move being made to correct nuisances and abuses ; important questions of sanitary science, and threatenings of the invasion of contagious diseases, have frequently come up and been summarily decided, without reference to a board which has in an eminent degree the respect of the profession, if not of the political Board of Health.

Open vaults, unprotected scavengers' carts, bone nuisances and filthy tenement houses send up to an avenging Nemesis an odor savory to her nostrils—but not of incense—and add daily fuel to the sacrificial fire which, in the summer months, consumes so many from our poorer classes. We would remind our brethren of the consulting board, that the Greek goddess whose rôle is put down as "a personification of the moral reverence for law, of the natural fear of committing a culpable action, and hence of conscience," has no shrine at the Temple of our City Fathers, especially at that season of the year when the gentlest mutual titillation of the muscles of the back is found to be the most appropriate "manipulation" for those laboring under fear of official dislocation.

We reproduce the letter of Drs. Derby, White and Ingalls, as expressing *our* sentiments.

"*To the Mayor and Aldermen, Health Commissioners of the City of Boston:*

The undersigned, members of the board of consulting physicians of the city of Boston, herewith respectfully present their resignation of the office to which they were chosen in February last. They had hoped that this office might be one of active usefulness, but they find it a sinecure. On the 14th of April, after consultation with the city solicitor, a communication was made by the advisory medical board to the health commissioners of the city, calling their attention to the sanitary condition of Boston, and suggesting certain measures of practical importance for the action of the department of health.

"The communication was referred by the board of aldermen to the committee on health. Receiving no reply to this letter, and seeing no evidence of any attention being given to it, the consulting physicians addressed a note, on the 7th of June, to the chairman of the health committee, asking if any additional measures for securing the health of Boston were contemplated. An answer was received from the clerk of the committee, stating that an inspection of tenement-houses had been ordered, and that when completed the result would be communicated to the consulting board. Since that time, however, no report has been received, although the newspapers have stated that such inspection was completed. On several occasions during the past season, events have occurred threatening the health of the city, but no reference of these or of any other subjects has been made to the consulting board. Other matters having a direct bearing upon the maintenance of public health besides those referred to in their letter of April have been considered during the summer by the board of consulting physicians, but it was felt that, under the circumstances, it would be useless to offer advice concerning them.

"During the year 1870, the sanitary state of Boston has not improved. The streets and alleys and passage-ways and back yards are still dirty. Vaults are broken and overflowing. House offal, during the hot season, has been kept in and about the houses until putrid. Unsound provisions are freely sold. The tenement-houses are a disgrace to Boston, and, from a recent examination by one of our number, they are reported to be in no better condition than one year ago. Five hundred children have died from cholera infantum in Boston during the past summer. When public property is at stake, professional advice is sought for its protection ; when public health is in danger, there seems to be equal reason for taking counsel of the medical profession, and this policy is recognized in nearly every great city of the world. In Boston alone the interests of public health are made a branch of the business of street-cleaning, and the advice of its consulting physicians is not asked, and when volunteered is rejected as of no value. A continuance in office under such circumstances would seem to the undersigned to be wanting in respect to the profession to which they belong.

"Regretting their inability to take part in a much-needed reform, they beg leave to retire from any participation in or responsibility for a state of affairs which they have no power to amend.

(Signed) GEORGE DERBY,
JAMES C. WHITE,
P. P. INGALLS.

BOSTON, Dec. 3, 1870."

ON THE DECUBITUS IN PHTHISIS PULMONALIS. By ROBERT W. FOSS, M.B., Edin., late Resident Clinical Assistant at the Hospital for Consumption, &c., Brompton.—It is an interesting fact that in many one-sided inflammations in the chest the decubitus is on the affected side, of which there is a satisfactory explanation in the hypothesis that the other side has to do double work, and so by this means its expansion is made the easier. In phthisis pulmonalis, on the other hand, the reverse is the case, the decubitus, instead of being on the most affected, is on the least affected side. Louis, speaking of this latter phenomenon, says, "This circumstance may consequently aid the observer without the use of auscultation or percussion in ascertaining which side of the chest is most affected."

I have examined fifty-eight cases of undoubted phthisis, and found that in forty-seven the decubitus was on the healthiest side, in three on the most diseased side, and in eight it was not affected at that particular time. Of the eight in whom the decubitus was not affected, five had double cavity, one had passive one-sided cavity, and two had crepitation to about an equal degree at both apices, so that in seven the disease was equal on both sides and in the eighth it was passive. In several of these cases at one period of the disease the decubitus had been solely on one side; but as it progressed and affected both sides equally, then the decubitus became dorsal, or finally abdominal.

Of the forty-seven whose decubitus was on the healthiest side, the disease in all was advancing with more or less rapidity. Of the patients who could lie on the most diseased side the disease was in a passive condition at the time; but in one of them soon afterwards active symptoms, as hectic, &c., set in, and then the decubitus was on the least affected side, so that it may be said that during the absence of active symptoms the decubitus is not so much interfered with, but that, as soon as they appear, where one side is more affected than the other, then the decubitus will be on the least affected side. This fact is interesting when taken in relation with the hectic flush, which is usually said to be greatest on the most affected side, so that we see the patient lying on the healthiest side, with the greatest flush on the opposite cheek—two things, when taken together, quite diagnostic of the most affected side—viz., decubitus=healthiest side, greatest hectic flush=cheek corresponding to most diseased side. In nearly all the cases there was softening on one or both sides, and until this process took place the decubitus was normal. There are two ways of accounting for this one-sided decubitus, neither sufficiently comprehensive, however: first, that by lying on the diseased side the abnormal secretions are emptied with greater difficulty; secondly, that the weight of the superincumbent viscera causes the increase of cough and pain complained of. In forty of the fifty-eight cases the left was the most affected side, bearing out the general rule.—*Medical Times and Gazette.*

DIVISION OF PATELLA. By JAS. S. KNOX, M.D., Somerville, N. J.—On the afternoon of July 3d last, I was called to see a healthy young German, æt. 23, who, while felling trees, had been struck by a descending limb, and had the blade of his axe driven into his right knee. On examination, I found an incised wound over the knee, the length of the blade of the axe, dividing the patella obliquely across from right to left, but sparing both quadriceps and patella ligaments. In dressing the wound, the two parts of the patella were turned aside, exposing the whole interior of the joint, with its smooth articular surfaces; clots were washed out with cold water, the bleeding of articular branches checked by torsion, the parts accurately co-adapted, and stitched together by close interrupted suture. A straight splint was then applied behind the joint, a saline cathartic administered, and the knee kept drenched thoroughly in ice water, for three days, until all heat and swelling had disappeared. There was no synovitis, or suppuration, nor was pulse ever above 80. The wound healed rapidly, the patella uniting by osseous union. In three weeks, the splint was removed, and in nine weeks the patient danced most of the night at a Dutch ball, without inconvenience or perceptible limp. The scar is, now, the only sign of a serious injury.—*Transactions N. J. Med. Society.*

FRACTURE OF THE STERNAL EXTREMITY OF THE CLAVICLE.—Dr. Robert W. Smith sums up an article on fracture of the Sternal Extremity of the Clavicle, in the *Dublin Quar-*

terly Journal, for August, with the following conclusions:

"1. In fractures of the acromial extremity of the clavicle, between the coraco-clavicular ligaments, when displacement occurs, it is in general limited to an alteration in the direction of the bone, by which the natural convexity of this portion of the clavicle is increased.

"2. In cases of fracture between the trapezoid ligament and the sterno-clavicular articulation, the displacement of the outer fragment is considerable, and is frequently carried to such an extent that the fragments form a right angle with each other.

"3. The doctrine of non-displacement in intra-rhomboid fractures has not yet been established upon so secure a basis as to justify its acceptance as a truth.

"4. In intra-rhomboid fractures the displacement of the sternal fragment, if it ever occurs, is the exception; that of the acromial fragment, to a greater or less extent, constituting the rule.

"5. The explanation is, that the former is firmly connected by strong ligaments to fixed and immovable parts, while the latter is under the influence of three causes of derangement of position, viz., muscular action, the weight of the upper extremity, and the mobility of the scapula.

"6. The influence of these causes in producing displacement of the outer fragment is not confined to intra-rhomboid fractures.

"7. In fractures of the inner extremity of the clavicle the nature of the derangement of the acromial fragment is uniform, and its direction constant, viz., forwards. The first rib offers a mechanical obstacle to its displacement backwards.

"8. The rhomboid ligament, from its direction, would permit of the outer fragment being displaced forwards and downwards, to a limited extent, were the bone broken internal to it."—*Michigan University Medical Journal.*

On the Air in Workshops.—The *Bowdoin Scientific Review* contains an article from Dr. Sigerson, in which he says of the air of iron works:

"Although a quantity of this iron, carbon and ash, must daily pass in and out of the lungs, and besides, although a certain percentage must remain in them (as shown by Pouchet's dissections and Prof. Tyndal's experiments), it is difficult to find a healthier body of men than those who work in such factories. Dr. Sigerson observed one exception, a young man whose lungs were weak, and who had suffered from blood spitting, with cough, contracted in an American foundry, where the heat was excessive. He inquired whether the atmosphere heavy with dust did not affect him injuriously. The artisan replied in the negative; he said that he found himself well in it, his cough coming on at home on rising and lying down. These facts seem to indicate that the carbon poured into the air of cities from gas-lights and fires may not have so injurious an effect as sometimes fancied.

"In the air of a shirt factory, fine threads and fragments of cotton and linen were found, with a few ova which were translucent. In this factory the girls had become snuff-takers.

"In the air of an oatmeal mill, fibres were seen present in unexpected numbers, together with minute fragments of the hull and a few starch granules. Some spores and acari were detected. Near a threshing mill some smut balls were found in the air.

"The air of flax mills was found to be especially deleterious. Fine particles of the flax, together with pointed particles of the hard bristly wood tissue, so that direct injury was done to the lungs by these, and concretions formed by the filaments. The mill people were great sufferers.

"The air of printing offices contains minute particles of metal, particularly antimony. Dust taken from a rafter eleven feet above the floor of a printing office was analyzed by Professor Sullivan, and found to contain antimony but no lead.

"The air of a hair-dressing room contained scales and minute hairs. In rooms where the machine brush is used the amount is increased.

"The air of the dissecting room contained fragments and fibres with the mark of the dissecting knife upon them! They were fibrils of muscles, yellow and white fibrous tissue, some cells, scales and corpuscles. The air of stables was found to contain moth scales, a few spores, hairs and fragments tinged blood-red.

"Tobacco smoke, examined by the microscope, was seen to hold little globules of nicotine twirling and flitting about in it. The statement is made by Dr. S. that 'some remained on the walls of the mouth; when the smoke is breathed (by novices) more globules are retained in the lungs, and nausea and illness supervene. These globules, if found in the air distributed by a tobacco smoker, might be taken for germs.'

"The air of the rooms of 'tea-tasters' was examined, but no report is given. An interesting observation, however, in regard to the avocation of the tea-taster will be quite new to our readers. The tea-taster has to take a sip with a quick inhalation, and thus a small shower of fine tea-drops enters the lungs. On examination of such tea-drops, a considerable quantity of tissue from the leaves was found, which might aid to tease the lungs. But the real agents of mischief were numerous little drops of essential oil, very plentiful in Assam tea, which was particularly severe on the tea-tasters. Nausea, derangements (or as Dr. S. says, dis-arrangements) of the nerves and sometimes syncope afflicted them.—*The Medical and Surgical Reporter*.

Death from the use of Chloroform in Dental Practice.—The following is copied from the *Dental Register* of Cincinnati, and is addressed to the editor of that periodical by Dr. E. C. Hamilton, of Washington C. H., Fayette Co., O., under date of October 5, 1870:

"*Dear Doctor*:—Another victim to chloroform paid the penalty in my office on Thursday last.

"Mrs. Garis, the wife of our county sheriff, came to my office on Thursday afternoon for the purpose of having three roots and one molar tooth extracted. Dr. I. G. Wilson, a physician of this place, was with her, to administer chloroform. After I examined the mouth, and laid out the necessary forceps for the operation, Dr. Wilson proceeded with the chloroform, and after administering probably ten minutes (he did not intend to put her entirely under its influence), he called to me to take out one tooth. I then extracted the root of the right superior lateral incisor, only about one-fourth of an inch in length, and attended with no difficulty whatever. The patient then asked for more chloroform, and the Doctor was on the point of giving it, when death ensued. Three physicians worked probably three hours to restore life, but all in vain.

"These are the facts in the case. Three of our medical gentlemen, who use chloroform extensively, attempted to charge upon 'the shock of extraction' as the cause of death, but the people so ridiculed the idea that they abandoned it. Of course all who are acquainted with the facts attach no blame or responsibility upon me, as it is well known that I have invariably refused to use chloroform, and have advised in every case against its use in dental surgery.

"I make this statement to you so that you may know what the facts are, and not be misled by newspaper statements, in case you desire to refer to the case in the Dental Register."

The Meteorology of November, 1870.—The mean temperature of the month of November at New Haven, Ct., was 43.3 degrees, which is three degrees above the average temperature of this month. The highest temperature of this month was 62.7 degrees on the 9th; the lowest was 26.1 degrees on the 17th. The range of the thermometer for the month was 36.6 degrees, which is nine degrees less than the average range for this month at New Haven.

The mean temperature of the past eleven months has been more than two degrees above the average of the same months for the past ninety years; and the mean temperature of the past seven months has been three degrees above the average temperature of those months. So great a departure from the average temperature, continued for so long a period, has not occurred before at this place for more than a century.

The amount of rain for Nov. was 2.80 inches, which is nearly an inch less than the average fall for that month. The entire fall of rain for the last ten months has been nearly thirteen inches less than the average fall of that period.—*Hartford College Courant.*

Amputations at the Pennsylvania Hospital.—From a "Statistical Account of the Cases of Amputation performed at the Pennsylvania Hospital from January 1st, 1860, to January 1st, 1870, with the Mortality following this Operation in the Hospital during a period of forty years," by Thomas George Morton, M.D., one of the Attending Surgeons, Surgeon to the Wills Ophthalmic Hospital, &c., we make the following extract. It follows the statistical tables of the ten years' operations, as published in the October number of the American Journal of the Medical Sciences, and their classification and results.

"Adding these results," Dr. M. says, "to the statistics of amputations performed at the hospital during the previous thirty years, published by Dr. Norris (and to whom I am indebted for notes of several of the years), we find that in 749 amputations, upon 735 patients, performed during the forty years from 1830 to 1870, 548 were cured, and 186 died, and 1 removed.

"500 were primary operations, performed during the first twenty-four hours after receipt of the accident, of which 117 died; 105 were secondary, of which 42 died; 144 were for disease of a chronic character, of which 27 died.

"232 of the patients were under 20 years of age, of whom 206 were cured, and 26 died; 217 were between 20 and 30, of whom 164 were cured, and 53 died; 152 were between 30 and 40, of whom 105 were cured, and 47 died; 87 were between 40 and 50, of whom 56 were cured, and 31 died; 44 were upwards of 50, of whom 23 were cured, and 21 died.

"Ether has been almost invariably used as the anæsthetic, and no death has, I believe, ever occurred in the hospital from its use; occasionally ether has been combined with chloroform; one sudden death (Case 165), however, occurred with the use of this mixture, during the removal of a fragment of necrosed bone following a leg amputation; the nitrous oxide gas I have used in very many minor operations, and in eight amputations of limbs, and have found it satisfactory when the operation was not prolonged."

Fatal Obstruction of Intestine from Disease of the Pancreas. By Henry F. Nathan, Assistant Surgeon Royal Naval Hospital, Malta.—W. G., aged 25, private in the Marines, was received into the Royal Naval Hospital, Malta, on April 11th, with a history of having been on the sick list of his ship for nearly a fortnight with catarrhal symptoms, and great debility, succeeded a day or two before admission into hospital by gastric irritability, foul tongue, nausea and constipation. When received into this establishment there was much nausea, tongue thickly coated with yellow in the centre, red at the tips and edges, a small weak pulse, constipation, incessant hiccough, and a tympanitic abdomen, the fulness being especially marked in the epigastric and upper half of the mesogastric regions; but no pain or tenderness anywhere. A few hours afterwards vomiting commenced, the matter vomited being in large quantities, stringy, thin, brownish, and of a strongly acid reaction. As the case progressed the hiccough was constant, the bowels acted at first after injection into the colon by means of a long flexible tube, and subsequently enemata of beef-tea returned laden with fœcal matter, the emaciation and debility increased, vomiting was always present, the ejected matter being of the character described above, and loaded with torulæ, but never stercoraceous; and what is rather remarkable is, that throughout the case there was no pain or tenderness in any part of the abdomen, the urine was secreted pretty freely, but was albuminous, which probably depended on renal disease, and there was no jaundice. The patient retained his senses to the last, but finally sank, apparently from exhaustion, at 8, P. M., on April 15th.

Necropsy.—On opening the abdomen the stomach was found greatly dilated, the omentum healthy, but here and there were small coagula of blood, caused by capillary rupture. The pancreas was much enlarged, and its head greatly indurated, almost possessing a mortar-like feel. The canal of the duodenum in the lower half of the descending portion was entirely closed by the pancreatic pressure, its coats were much thickened, its mucous membrane swollen, and intensely congested at this point. The lining membrane of the upper part of the duodenum, and of the stomach, although slightly congested, were healthy. The liver was somewhat fatty, and pushed up towards the thorax. The kidneys were enlarged, and in the first stage of fatty degeneration. The gall bladder was distended.—*Med. Times and Gazette.*

The Simplest Form of Micro-Telescope.—At a field meeting of the Albany Institute, held in Hoosic Falls, on the 24th of September, Dr. R. H. Ward, of Troy, N. Y., exhibited a simpler form of micro-telescope than has hitherto been proposed. He screws an ordinary 4-inch objective (5-8 inch wide, 2 3-4 inches solar focus) into an adapter (about two inches long) below the stage of the "seaside," "clinical," or any other hand-microscope. To this object-glass the compound body, with all its lenses, acts as an erecting eye-piece, as in Tolles's telescope and Curtis's micro-telescope. Of course, no one would expect from a 5-8 inch opening the light of a 1-inch opening; but the new arrangement gives a really useful field-telescope without requiring a single addition to the microscopist's apparatus. Solid (single combination) objectives act best as erectors in this case, but the ordinary objectives, from 2-inch to 1-2 inch, answer very well.—*The American Naturalist.*

Deaths by scarlatina, in London, last four weeks—192, 167, 174, 150 successively.

Medical Miscellany.

The Dangers of Iron in Phthisis.—M. A. De Beaufort calls attention, in the *Bulletin de la Soc. de Pharm. de Bruxelles*, to the danger of administering perchloride of iron for the arrest of hæmoptysis in tuberculous patients, on account of its coagulating action on the blood. According to the writer, this drug creates additional vascular obstructions; fresh capillary embolia; new foci of caseous pneumonia; so that a patient whose case was not very serious before the use of the salt, may die within a few days of asphyxia, or have the gravity of his condition greatly increased. M. De Beaufort would, for the same reasons, forbid all ferruginous preparations in the treatment of consumptives, most of them possessing coagulating properties. In this way, also, may probably be explained the fact, doubtless familiar to every practitioner, that persons subject to "piles" can seldom take iron for any length of time without provoking the formation of one or more hæmorrhoidal tumors.—*Medical Gazette.*

Scalped by Indians.—The following case is reported by Dr. R. C. Moore, in the Transactions of the Nebraska State Medical Society for 1870:

William Thompson, an employé of the Union Pacific Railroad Company, was scalped by the Cheyennes, near Plum Creek Station, Nebraska, on the night of the 6th of August, 1867. He was placed under my care on the morning of the 8th, about 36 hours after the wounds were inflicted. The scalp was entirely removed from a space measuring nine inches antero-posteriorly, and seven inches laterally; the denuded surface extending from one inch above the left eyebrow, backward nearly to the occipital protuberance, and laterally from one temporal region, over the vertex, to the opposite. The pericranium was in places detached, but the greater portion of that membrane was dried and adherent to the bone. There was also a severe tomahawk wound of the right parietal bone, the fissure extending backward, and downward in the diploe, to the depth of an inch and a half, splintering the external table, but producing no injury to the internal. I also found a slight gun-shot wound through the fleshy part of the right arm. The only dressing used during the whole course of treatment was surgeon's lint, saturated with pure olive oil, which excluded the air, and was easily removed for the purpose of cleaning the wound.

Healthy granulations soon appeared on the tissue surrounding the denuded calvaria, but showed no disposition to extend over the bone. In about three weeks the outer table began to exfoliate; at first at the margins, then under the adherent pericranium, the exfoliation extending more rapidly along the course of the nutrient vessels ramifying through that membrane. As this suppurating and exfoliating process progressed, granulations sprung from the diploe, till the entire surface presented the appearance of a healthy wound. The last portions of the outer table to become detached were the spots from which the pericranium had been removed.

The suppuration was very profuse, but the patient being strong, and enjoying excellent health at the time the wounds were inflicted, did not at any time during the course of treatment present those symptoms of depression which would naturally be expected to follow so extensive an injury, nor were there any symptoms indicating that the inflammation had extended to the brain or its membranes. The only inconvenience or unfavorable complication was a severe neuralgic pain, extending down the right side of the head and face; but after the external table of the skull was cast off the pain ceased, and there was no further disturbance of that character. The case progressed favorably, and in about three months from the time the scalp was removed nearly the entire surface was cicatrized.—*Med. and Surg. Reporter.*

Mucuna Pruriens.—A pharmacist in Savannah, Ga., has ascertained that the terrible itching caused by the injudicious handling of mucuna pruriens (cowhage) can be at once relieved by the application of camphor liniment.

To Correspondents.—Communications accepted:—Cases of Transplantation of Skin at the City Hospital.—Surgical Cases at the City Hospital.

Books and Pamphlets Received.—Lunacy: Its Past and Present. By Robert Gardiner Hill, F.S.A., late Medical Superintendent of the Lincoln Lunatic Asylum, &c. London. Pp. 109, iv.—The Old Franklin Almanac for 1871; comprising a great variety of Statistics, Chronological Tables, and other useful matter. A. Winch, Philadelphia. Price 20 cents.—The Physiological Laws of Human Increase. By Nathan Allen, M.D., of Lowell, Mass. Pp. 27.—Annual Report of the Surgeon-General United States Army. 1870. Pp. 10.—Memorandum referring to Extracts from Letters, Reviews and Bibliographical Notices of the Publications of the Surgeon-General's Office, U.S.A. Washington. Surgeon-General's Office, 1870. Pp. 19.

Deaths in fourteen Cities and Towns of Massachusetts for the week ending Dec. 3, 1870.

Cities and Towns.	*No. of Deaths.*	*Prevalent Diseases.*	
Boston	101	Consumption	46
Charlestown	8	Pneumonia	21
Worcester	16	Typhoid fever	13
Lowell	14	Croup and Diphtheria	13
Milford	4	Scarlet fever	6
Cambridge	12		
Salem	7		
Lawrence	14		
Springfield	5		
Lynn	7		
Fitchburg	3		
Newburyport	4		
Fall River	16		
Haverhill	2		
	213		

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Dec. 3d, 101. Males, 57; females, 44. Abscess, 2—accident, 3—apoplexy, 4—disease of the brain, 5—bronchitis, 5—cancer, 2—cancrum, 1—cholera infantum, 2—consumption, 25—convulsions, 1—croup, 3—debility, 1—diarrhœa, 1—dropsy of brain, 1—diphtheria, 3—scarlet fever, 4—typhoid fever, 2—"fits," 1—disease of heart, 2—infantile, 5—disease of the kidneys, 1—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 8—marasmus, 3—old age, 1—paralysis, 2—premature birth, 1—suicide, 2—unknown, 5—whoop. cough, 1.

Under 5 years of age, 32—between 5 and 20 years, 14—between 20 and 40 years, 22—between 40 and 60 years, 20—above 60 years, 13. Born in the United States, 71—Ireland, 26—other places, 4.

THE

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Original Communications.

CASES OF TRANSPLANTATION OF SKIN AT THE BOSTON CITY HOSPITAL.

Reported by Messrs. BELT, HANDY and BOLLES, House Surgeons.

CASE I.—(Service of Dr. INGALLS.)—B. K., æt. 36, domestic, entered the hospital Aug. 5th, 1870, for an old recurring ulcer of the leg, measuring two by three inches. In part of its surface deep, offensive and irregular. She was ordered a wash of soda chlorinata (ʒiij. ad Oi.), under which she steadily improved.

Aug. 14th.—A portion of healthy epidermis was removed from the inner aspect of thigh and placed within the ulcer at three different places, each piece as large as a millet seed, "with the idea of giving the ulcer several points to heal from and thereby hasten its closure."

On the 17th, after the removal of the plaster for the first time, no islets were seen, after which no mention was made of the transplantation, but the leg took on a healthy action, and healed very rapidly, *growing from several centres*, and, on the 26th, patient was discharged, well.

CASE II.—(Service of Dr. FIFIELD.)—A. C., female, æt. 20, entered June 3d, 1870, with a large, foul and deep syphilitic ulcer of left leg, five by six inches; in the middle, the tibia was exposed for nearly two inches. From time of entrance until the middle of October, almost every kind of local and constitutional treatment had been tried, and the ulcer had become stationary at about one half its first size. Several large and very many small pieces of bone had exfoliated.

At this time the tibia was cut down upon, and dead bone removed; the ulcer was treated still further for a week, and again remained stationary.

Oct. 25th.—Several pieces of skin, each as large as a rice grain, were transplanted to the surface of the ulcer and covered with plaster.

Nov. 15th.—Nothing could be seen of the pieces, but the ulcer had contracted considerably. Six new pieces of skin were then inserted in little cuts made in the granulations. Three days after, nothing seen of these.

20th.—Ten more transplantations.

23d.—Six more, two of which were taken from nurse.

25th.—Several bits of reproduced skin are seen in place of earlier transplantations (those of Nov. 15th). Those of the 20th are all adherent, but the epidermis is peeling off from the true skin and falling away. The remaining portion of the transplanted skin is whitish or bluish, and firmly adherent.

26th.—All the last pieces are also adherent. Five more put on.

Dec. 1st.—A bridge, three quarters of an inch long, has formed across the lower corner of ulcer by three pieces of skin which have extended and met, and another, one and a half inch in length, across another angle, is almost completed by three more. Nineteen pieces can now be counted, all growing, and a portion of which have also retained their epidermis. The larger islands now are circular, more than one fourth inch in diameter, consisting of the original skin and a broad, white border of new growth. They amount in all to one third of the area of the ulcer, which is triangular, and two and a quarter inches from corner to corner.

CASE III.—(Service of Dr. INGALLS.)—M. C., æt. 28, domestic, entered hospital Oct. 28th, 1870, with an old recurring ulcer on the inner aspect of the right leg and one inch above the malleolus. It was three inches by two inches in diameter, deep, and with an inflamed base, sharp edges, and surrounded by a halo of bluish tissue. The veins of the leg were varicose. Water dressing was applied.

Nov. 3d.—The ulcer has lost its inflamed base and sharp edges. Three pieces of skin, the size of canary seeds, were taken from the inner aspect of arm and placed upon the surface of the ulcer, and the water dressing re-applied.

Nov. 14th.—The ulcer is contracting.

Two of the pieces of skin planted have taken root and are spreading over surface of the ulcer, one being the size of a pea.

18th.—One of the pieces planted has extended across the ulcer and united with both edges, and laterally for two thirds of an inch. The other has united with the edge of the ulcer, and is about the size of a buck-shot. The growth of the bits of skin and the contraction of the edges have nearly healed the ulcer.

26th.—Ulcer well. The largest piece of skin grew to the size of a five-cent nickel coin; the smaller, to that of a three-cent silver piece.

Case IV.—(Service of Dr. Fifield.)—I. V., æt. 12, male, entered Oct. 21st, 1870. Suffered great loss of skin of right arm by sloughing after an injury, leaving an ulcer extending around the limb and nearly six inches vertically.

Nov. 16th.—Two small pieces of skin were removed from the leg and put into cuts in the granulations.

20th.—No adhesion. Nine pieces laid on to-day and covered with isinglass plaster.

24th.—Six more pieces, each divided into two. Those of the 20th appear to have come away.

Dec. 1st.—No success thus far. The granulations in this case have been rather flabby from the first.

Case V.—(Service of Dr. Fifield.)—D. F., æt. 31, male, entered Oct. 24th, 1870, for a recurring, deep, varicose ulcer one and a half inch in diameter. Dressed at first with wet strapping, according to the "Chapman method."

Nov. 22d.—Ulcer now three fourths of an inch by one inch. Four bits of skin laid in a square, half an inch apart, on its surface.

30th.—All the pieces adhered and have met each other. The edges of the ulcer have also reached the skin transplanted. There only remains to heal a minute spot in the centre of the "square." The epidermis in this case did not come off.

Dec. 4th.—Entirely well.

THE AGUE THEORY.

By John W. Weir, M.D., Edwardsville, Ill.

I read with much interest, in the Journal of January 14th, 1869, a review, or criticism, by Dr. H. W. Harkness, of Sacramento, Cal., on Dr. Salisbury's theory of the cause of fever and ague. Dr. H. says: "A small vegetable spore of Palmella, one five-thousandth of an inch in diameter, was dragged to the light of day, and the culprit put upon his trial. A few suspicious circumstances connected with the development and growth of the criminal were brought forward as proofs, and cleverly analyzed, and the little atom was declared guilty of having been the cause of half the ills of human life."

Dr. H. very "cleverly" criticizes the theory of Dr. S., but in the sequel leaves the subject still further in the dark, by suggesting that the "culprit" may be a subtle ether in the atmosphere. He tacitly falls into the miasma theory. The truth is, I believe, that all members of the profession, who have written on the subject, have either advocated or adopted the miasma theory, or failed to say anything respecting it; and it has thus become the settled theory for the past fifty years.

I think it is well for the human, and animal creation, that, although this little spore was "dragged to the light of day, and condemned," it has thus far escaped execution. For I think that which has been thought to produce "half the ills of human life," is a vital ingredient of our atmosphere, and as essential therein as oxygen, hydrogen, carbon, or nitrogen.

When I was reading medicine with Dr. Kendall Davis, of Reading, Mass., in 1834, I observed the mercury, in the thermometer in my room, rose and fell only 5° from the warmest part of the day to the coolest part of the night. This surprised me, for I was aware that in Kentucky, where I had formerly lived, the rise and fall was from 20° to 30°. My attention was particularly called to the fact on a hot day in August, when I found the thermometer to register 80°; having occasion to be in the open air during the night, I found many of the large stones still retaining the heat which had been given them by the sun during the day, and in turn they gave it off to the surrounding air, and thus maintained it at a temperature only 5° less than it had during the day. I believe I learned from this circumstance the cause of chills and fever. The North-eastern States are so studded with stones that, during the warm season, they become heated during the day, and keep the air comparatively warm and dry during the night, and, in the cold season, become as icebergs at night, and keep the days cold. They act as equalizers, summer and winter, and hence there is but little difference in the temperature of day and night.

During a constant practice in this malarious region, I have seen no reason to change the opinion I formed in Reading, thirty-six years ago, that chills (intermittent fever, or fever and ague) owe their origin to sudden transitions from heat to cold, or from a dry, heated atmosphere during the day, to a cold, damp one at night. I will venture to say, without fear of successful refutation, that there is no region of country, in the temperate zones, where there is a rich alluvial soil, unprovided with stone, where there are not chills and fever. The damp, cold exhalations from the earth after sundown, and after the exhausting heat of a summer or autumn day, are too great a tax on the human system, unless it is very vigorous, or well protected by nourishment and clothing for the sudden change.

My experience is, that the poorly fed and poorly clad are those who suffer most from chills and fever. The mercury here will indicate, in our warmest days in July and August, from 100° to 105°, and during the night falls to 70°, and then, without any indication of decomposed vegetable matter, chills will set in. In 1869, during the months of July and August, in the warmest part of the day, the mercury marked from 100° to 105° in the shade, almost every day during those two months, and on the first of September the weather became suddenly cold, and in forty-eight hours from that time, the mercury fell to 45°, a change of 60° in two days; and it continued cold for ten or twelve days. For the past two months, but very little rain had fallen, and no decomposition of vegetable matter had taken place. I predicted, when it turned so cold, that the whole country would be afflicted with chills; and I never saw so large a proportion of persons having chills, as during the following two months. The weather had been very warm and exhausting during the hot months, causing a relaxed condition of the system; the sudden change to cold drained the body of caloric, which the vital powers could not restore, and, as a consequence, attacks of fever and ague were very frequent.

Dr. Harkness mentions the extensive marshes in California, where, he says:—"The farmers living on and contiguous to these borders, have long since learned that the ague prevails to a great extent along this shore line, and also for a considerable distance inland from its margin, but a residence in the centre is safe." Now how can we account for this? why is the centre of the marsh healthy?

To my mind it is very clear. During the winter and spring, water stands in the marsh, and through the summer it is found very near the surface, and so maintains a constant cool and damp atmosphere. On the shore, on the contrary, and for some distance inland, the temperature is raised by the sun to a considerable height during the day, but at night it is suddenly lowered, by the absence of the sun and the exhalations from the marsh, nearly to that of the marsh itself.

Dr. Salisbury, in one of his searches for the ague plant, placed boxes of moist earth, supposed to contain ague poison, in the open window of the bedroom of two young men, and, it seems, gave them the ague. So would boxes of any moist earth, or boxes of ice, have filled the chamber with cold, damp air, and produced the same effect. The temperature will be as high in a grove of timber, of a summer day, as on the high prairie, yet at night will be four or five degrees lower, and ague is much more common in timber than in prairie. An embankment of earth thrown up will lower the temperature at night several degrees, and subject those living near to ague. On all newly made farms in the west, ague prevails until cultivation dries the surface and stops damp exhalations at night.

The philosophy of chills and fever, as I have understood the subject for many years, is this: A person exerts himself during a warm day; a cold wind comes on, or nightfall, while he is in a profuse perspiration, and without nourishing food, or additional clothing, he loses a large supply of animal heat. This is repeated daily for a time; the extremities of the exposed person become cold, he loses vitality, his heart beats feebly, and he sinks into a chill; he is *really dying*, and if there is not vital power enough left, death ensues; if life continues, however, a series of phenomena take place, which, by appropriate treatment, may result in recovery.

I have not believed for thirty years, nor do I now believe, that intermittent fever is produced by any miasmatic poison, but is the result of sudden and repeated draughts of animal heat from the system, which feeble persons can prevent only by suitable clothing, nourishment and tonics.

My theory and experience of the treatment of chills and fever differ as much from the general theory, as does my opinion of its cause. Quinine is, no doubt, the most direct agent we have yet found to break up chills, but I deny that it contains any tonic properties. You may stop chills with quinine, but they will return again, so sure as the system is not fortified by management or tonics, by medicine other than quinine.

CASE OF TRAUMATIC TETANUS TREATED BY MEANS OF THE CALABAR BEAN.

By Walter E. Anthony, M.D., of Providence, R. I.

George J. B., an engineer, 32 years old, was standing beside a steam fire engine, at 1 o'clock, A.M., Tuesday, September 19th, when the boiler exploded. He was thrown violently to the ground, the machine falling partially on him. I saw him twenty minutes after the accident, and found, upon examination, a compound comminuted fracture of the right arm at the upper third ; a fracture of two ribs on the right side, and several cuts about the head and face.

He was removed to his home, and his wounds dressed. It was found that the fracture of the arm was in an oblique direction, involving the whole attachment of the pectoralis major, which, acting upon the upper fragment, tended to draw it in toward the body, thus rendering it very difficult to keep in position. The arm was put up in a tin splint, made to fit it, and extension applied by means of a weight attached at the elbow.

Until Saturday night, five days, he was unable to pass water, and was obliged to have a catheter introduced twice a day. His bowels were moved by means of injections. Saturday night, he passed his water without assistance, and continued to do so. His pulse, which, on the morning of the accident, was 104, had gradually sunk to 70, where it remained until Friday, the 30th, eleven days after the accident. Friday morning, he began to complain of stiffness of the jaw, which continued slightly until night. About 12 o'clock, it began to increase, so that by morning deglutition was almost impossible. Gave him calabar bean, fl. ext., ♏v., repeated once in two hours, which was increased, in the morning, to ♏x.

At 12 o'clock, as he was unable to swallow, I ordered injections of beef tea with brandy to be given, and repeated in four hours. Jaws were firmly set.

Gave hypodermic injection of morph. sulph. ¼ grain. 10, P.M.—Increased the dose of calabar bean to ♏xx.; saw no effect at all from the use of it. Water passed involuntarily.

Sunday, Oct. 1st, 7, A.M.—Patient able to converse, could swallow with difficulty, gradually grew worse from 8 o'clock. At 10 o'clock, he had opisthotonos, and spasms of the diaphragm. He retained his senses until about 12 o'clock. He died at 2 o'clock, P.M. His jaws were firmly set, and the muscles of the abdomen were rigid.

Autopsy, eighteen hours after death.—I was allowed to make an examination of the arm only. I found considerable infiltration of blood. The fracture was oblique, extending from the outer portion of the head of the humerus downward. The upper fragment measured three and a half inches in length.

The bone was comminuted. No lesion of the nerves could be discovered.

During the progress of the disease, the calabar bean was used without any apparent effect.

The preparation used was the German fluid extract, procured from Theo. Metcalf & Co., Boston. The dose set down in the Pharmacopœia is five minims. This was increased to twenty, without any effect. The injections of sulphate of morphia relaxed the spasms for a short time, but they constantly returned with greater severity.

A CASE OF ECTOPIA CORDIS.

By Dr. Neumann Schlessinger. Translated from the Proceedings of the Berlin Medical Society,
by Henry Tuck, M.D., Boston.

The anterior displacement of the heart entirely outside of the walls of the thorax, without any complication or other deformity, is very rare. I have found only six cases of this sort on record. The first, observed by Martinez in Madrid in 1706 ; the second, by Büttner in Königsberg in 1745 ; the other four by Sandifort, Haan, Albers, Monod and Cruveilhier.

Ectopia cordis in connection with other deformities, such as extrusion from the body of some one or more of the abdominal organs, has been much oftener reported.

The rare case here reported is uncomplicated ectopia cordis.

The child to which this heart belonged, and which I showed this Society at its last meeting, was born March 3d, 1870, of a healthy mother 24 years of age. I saw the child ten minutes after its birth. The child was well developed, and, when first born, made three or four gasping inspirations, but when I saw it had ceased to breathe.

The heart lay entirely free upon the centre of the sternum, horizontally across the body, its base towards the left and its somewhat rounded apex towards the right. It had no pericardium. Upon the heart, not far from its apex, was a short, reddish-white projection, eight millimetres (one third of an inch) in length. The heart was in active contraction. At first there were 64 contractions in a minute; after half an hour there were 18, and in an hour and a quarter they had entirely ceased. The systole always began with the contraction of the auricles; then the contraction of the ventricles followed, so that the end of the contraction of the auricles was synchronous with the beginning of the contraction of the ventricles. Before the ventricles were quite contracted the auricles relaxed, then the ventricles relaxed, and now both auricles and ventricles remained for a time dilating, always exactly repeating the same process. As regards the change in shape of the heart during contraction, there was also to be noticed, with the decrease of the diameter of the heart from side to side and increase of its length (as has been shown by vivisection in physiological experiments), a difference of length of the two ventricles; the left ventricle lengthened during the systole, while the right showed some shortening.

In answer to the question if there is any great value, physiologically, to cases of ectopia cordis, it must be freely admitted that the condition of the heart is not its normal one; but still the opportunity to observe the human heart directly while it is in action is not to be neglected. Martinez, Sandiford, Monod and Cruveilhier had this opportunity in their cases of ectopia cordis, but the latter only made any accurate report of his observations. Cruveilhier observed that the heart shortened its long diameter during contraction; while on the other hand Hering, in the case of a calf which lived with ectopia cordis ten days, reported it as lengthened. The cases seen by Harvay, Portal and Bamberger were those where, owing to abscess of the thorax, caries of the rib, or a wound, the heart could be seen or felt, but only partially. Other cases are recorded where, though the skin was entire, yet owing to fissure of the sternum, or some defect in the ribs, the heart's movements could be seen.

In the case seen by me, the difference in length during the systole of the right and left ventricles can be explained by the difference in the arrangement of the muscular fibres in the two ventricles. The circular and spiral fibres are much more numerous than the longitudinal fibres in both ventricles; but in both men and animals the right ventricle has a much larger proportion of longitudinal fibres than the left. I think that this was the case in the heart of this child. This could not have been determined without injuring the heart so much as to spoil it as a preparation, and it had already been given to the Pathological Institute. If I am correct in this opinion, then it follows that during the systole, owing to the preponderance of longitudinal fibres, the right ventricle shortens, but the left, owing to the preponderance of circular fibres, lengthens. It is not impossible, owing to the different arrangement of the fibres found in different hearts, that the change of form during the systole is not always the same. Finally, it is evident that the object in view, the emptying of the ventricles, is accomplished in either case, whether by circular pressure or by pressure longitudinally from base to apex.

This also explains the fact that in healthy persons there is found much difference as regards the place where the heart's impulse is felt, much greater than can be accounted for by variations in muscular development and adipose tissue.

The *post mortem*, made by Prof. Virchow, showed a patent foramen ovale and a defect in the septum ventriculorum. It is not probable, however, that these had any material effect on the action of the heart.

There were, besides, two venæ cavæ superiores, which as it is worth remark have always been found in cases of ectopia cordis where a careful examination has been made.

As regards the development of this abnormal condition of the heart, it must be remembered that, at a certain point in its development, the heart lies free and is not enclosed by the thorax. Later, the thorax and abdominal walls grow up from both sides, approach nearer and nearer together, and finally enclose the heart.

It is impossible to say with certainty, of course, that in this case some mechanical movement of the heart, before this closure of the thorax, threw it out of place, but still it is possible that the reddish-white projection, already mentioned, near the apex of the heart, a remnant of a fibrous band, may have held the heart firmly at some embryonic period of its development and prevented its being enclosed by the thorax.

Dr. J. J. Giltenan, of Cincinnati, sailed from New York, Nov. 16th, for France, to join the Anglo-American Ambulance Company.

Selected Papers.

ANTIDOTAL EFFECT OF CHLOROFORM ON STRYCHNINE.

By W. H. Gobrecht, Professor of Anatomy in the Medical College of Ohio.

Early in the morning of Thursday, December 5th, 1867, I was called to the Gibson House, Cincinnati, Ohio, to visit a young man, aged about 20 years, said to have been taken suddenly ill. I found the patient in a state of profound repose, so to speak, with regular but rather labored breathing, bordering on stertor; a pulse full and pretty regular, though not forcible; he was insensible; pinching or shouting was not appreciated; he was unable to swallow. In fact, on first examination, he appeared to be in just such a condition as one who had often seen the effects of opium in excess would have charged to that drug; so I remarked, "This man seems to have poisoned himself with laudanum or morphia; wait, however, until I have examined his pupils." The pupils were undoubtedly dilated, for I distinctly recollect having said, "It is *not* opium, but what it is I cannot at present certainly tell." My delay in reporting this case is due to not having made a memorandum at *that time* of the *precise* condition of the pupils (great accuracy being, in my opinion, essential in all exhibits for the benefit of the profession); yet I was then plainly satisfied, being familiar with opium symptoms, that no such narcotic had been employed.

I concluded to act on general principles. Internal stimulants could not be given, as the patient could not swallow, so I determined to keep up and increase respiration by the use of the electro-magnetic machine, until the unknown poison had been eliminated by the lungs. Just before leaving to obtain my machine, I, for the sake of his comfort, changed the position of the patient, who had been lying for several hours upon his back, to his side. In this movement his pillow was displaced, when a bottle, corked, containing a small quantity of fluid with a few shining crystals, rolled from beneath it. This fluid, on examination, appeared to be chloroform, yet there was no odor of it in the room. The Marshal of Kentucky, who had charge of the man under a requisition from the Governor of Ohio, then recollected that towards morning his prisoner had risen, examined his valise, and quietly returned to bed, where he had remained just as quietly until the time when the marshal, failing to awaken him, became alarmed and sent for aid.

On my way for the electro-magnetic machine, I left the vial with Mr. E. S. Wayne, chemist, desiring an immediate analysis of its contents. Shortly afterwards he informed me that the fluid submitted to him was a saturated solution of strychnia, with crystals in excess, in chloroform, and that if the bottle was originally full, it must have contained an ounce of chloroform with at least *fifteen* grains of strychnia. On again reaching the patient, perhaps in an hour or less after leaving him, he was in the same quiet condition, without a single strychnine symptom, though somewhat depressed and evidently anæsthetized, which state the analysis of the fluid seemed to throw some light upon. I immediately commenced to pass regularly-successive electro-magnetic currents (by Kidder's machine, with full power) from the nape of the neck to the pit of the stomach, in the ordinary manner for artificial respiration, which were continued more than an hour. During this time sensation and consciousness gradually returned; the patient then recognized those about him, and for some time slept, with brief intervals, tranquilly. On awaking, and during Friday, he had some general numbness. On Saturday, December 7th, 1867, very trifling numbness only and some exhaustion remaining, his father determined on removing him to his home in Kentucky. The trip is reported to have been attended by insensibility, lasting thirty-six hours. On February 11th, 1868, the father wrote me: "I do not know, but, judging from appearance, there is no trace of poison existing either in his mental or physical system."

The chemical analysis of Mr. Wayne and the observation of the marshal are fully sustained by the statement of the patient, who had no knowledge of the examination, or observation, for he, in answer to my inquiries, said that, supposing chloroform and strychnine were the most certain poisons, he had obtained from a druggist *friend* the bottle of chloroform and fifteen cents' worth of strychnine, to use in case of need. Being determined to destroy himself, he got out the preparation, and first *inhaled* all he could, but finding this did not produce the desired effect, *swallowed* all but that which was found in the bottle under the pillow.

It would thus appear that the patient had taken, before I saw him, seven-eighths of an ounce of a saturated solution of strychnia, with crystals in excess, in chloroform, both by inhalation and ingestion, without any other result than complete and prolonged anæsthetization and some temporary subsequent numbness, with no known injurious consequences after two months had elapsed.

The case is reported as a contribution to toxicology, somewhat peculiar, as the *strychnine effects seem to have been destroyed from the beginning.* It is therefore, perhaps, more marked, as far as the antidotal property of chloroform is concerned, than those quoted in the *United States Dispensatory*, 12th edition, 1856, under "Strychnia," p. 1357, and in the foot-note to the same.[*]

In corroboration of the statement of Prof. Gobrecht, as to the effects of chloroform as an antidote in the case of supposed poisoning from strychnia, Dr. John L. Atlee, of Lancaster, related the following case:—

On Tuesday afternoon, about 2 o'clock, August 21st, 1857, I was requested to see Mr. A. C., aged about 60 years, a man of herculean frame and great muscular strength, who was found in his chamber at the hotel, laboring under violent spasms. This man had at one time occupied a highly respectable position in the community in which he lived, and belonged to one of the oldest and most respectable families in the county. For several years he had been suspected of harboring horse-thieves and burglars at his tavern in the country, but by his consummate tact and cunning had eluded the vigilance of his neighbors who suffered from the depredations of the outlaws. In the beginning of the year 1857, however, he was accused of receiving stolen property, and his trial was fixed for the April term of that year. It did not, however, take place until the following term, in August, when he was convicted of the offence. He was at dinner, at 1 o'clock, P.M., when he overheard the remark of a gentleman attending the court, that the jury had found him guilty. He immediately rose from the table, went to his chamber, was seen to mix something in a tumbler with water, and drink it, and not long afterwards was found in the condition subsequently described. Dr. Charles L. Baker, a very intelligent young physician, now deceased, then boarding at the hotel, was called in to see him. Finding his symptoms peculiar, and the patient altogether unwilling to take medicine, he sent for me.

Upon entering the room I found the patient in bed, lying upon his back, his countenance flushed, and with a stern and almost demoniac expression; his pulse natural, skin moist, and his intellectual faculties perfect. Dr. Baker informed me that he suspected poison, and had endeavored to administer emetics; but that the patient had obstinately refused all medical assistance. While receiving this information a violent spasm seized the patient, which I observed was of a decidedly tetanic character, similar to those previously observed, and which affected all the voluntary muscles. I told the doctor that I was satisfied the patient had taken strychnia. He had frequently declared, before his trial, that, if convicted, he would never suffer imprisonment.

Finding the patient obstinately bent on self-destruction, the use of the stomach-pump was suggested, and Dr. B. went to procure it. In his absence I used all my endeavors to induce the patient to take the emetic, without avail; and while pressing the cup to his lips I discovered that his jaws were firmly closed, that he had a full set of teeth, and that it would be impossible, in a man of his great muscular strength and determination, to use the stomach-pump. It then occurred to me that by means of chloroform a double object could be gained—a subjection of the patient and a relief from the spasms. I went next door to the druggist, where I found Dr. B. preparing the stomach pump, procured two ounces of chloroform, and with him returned to the patient, whom I had left in the care of a student.

While at the druggist's, I ascertained that at the April term of the court, when he had expected the trial to come on, the patient had purchased there twenty grains of strychnia. This confirmed my suspicion as to the cause of the symptoms, and showed the evident bent of his mind. On our return we found the spasms increased in force and frequency.

By means of a folded napkin the chloroform was applied to the mouth and nostrils; but no sooner was it done than he grasped the napkin violently with his right hand, tore it away, and openly defied me to administer remedies to him. I then appealed to the gentlemen attending court, who by this time nearly filled the room, to assist us in holding down the patient, and by this means—having two persons to each arm and leg, and having the head firmly held—I was enabled to use the anæsthetic. In a few moments it produced its effect; his whole muscular system became relaxed, and he remained for ten or fifteen minutes perfectly quiescent. As soon as he was restored to consciousness, we found that a total change, mental, moral and physical, had taken place. The spasms had left him, the expression of his countenance was calm and comparatively pleasant, and he was perfectly obedient to every request made of him. He took the emetic without difficulty, and we soon had the satisfaction of seeing his stomach thoroughly evacuated. He had partaken of a portion of his dinner before swallowing the strychnia, which probably prevented a more rapid absorption of it. At this time, about 3 o'clock, P.M., I had to leave him, for three hours, under the care of Dr. B., with the understanding that he would re-administer the chloroform, should there be a recurrence of the spasms. At 6 o'clock, P.M., I found the patient apparently well; there had been no spasms; his mind was calm, his temper placid, and he complained of nothing but weakness. He had a good night, and the next morning, although suffering from muscular debility, and some unsteadiness in his gait, he was brought before the court, and sentenced to confinement in the Eastern Penitentiary, where, a few weeks afterwards, he committed suicide, by hanging, in his cell.—*Trans. Penn. State Med. Soc.*

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[*] "And several cases are on record in which the inhalation of chloroform has not only afforded great relief, but appears to have been the means of saving life. Chloroform has been used also with seeming advantage by the stomach. In a case recorded by Dr. Dresbach, of Tiffin, Ohio, two drachms swallowed by a patient alarmingly ill from the effects of three grains of strychnia produced complete relief in less than fifteen minutes."

And also in a foot-note:—

"In a letter to the authors from Dr. Wm. D. Barclay, dated Muscatine, Iowa, May 4, 1863, the case of a robust young man is described, who, after taking four grains of strychnia, was seized with the most violent tetanic spasms, accompanied with intense suffering, and recovered under the use of chloroform, given both internally and by inhalation. It was necessary to keep him under the influence of the medicine for thirteen consecutive hours, during which two pounds of chloroform were consumed by inhalation. Two drops were given every five minutes by the stomach, when the mouth could be opened."

EXPERIMENTAL RESEARCHES ON THE SPINAL CORD.

By MM. Masius and Vanlair.

The authors commence their memoir with a histological examination of the *filum terminale* of the spinal cord of the frog. At its posterior extremity this *filum* is exclusively formed of layers of epithelial cells, surrounded on the outside by the *pia mater*, and enclosing a canal which ends in a *cul-de-sac*. More in front they find, beyond the epithelial mass, some large multipolar cells, with nucleus and nucleolus (nerve cells) lying between the pia mater and the epithelium; still more anteriorly, they observe pale, varicose, and longitudinal nerve-fibres, the existencee of which Kölliker had already pointed out. At the point of emergence from the coccygeal canal, the stratum of radiating cells and fibres gradually becomes thicker as far as the origin of the tenth spinal nerve. The prolongations of the nerve cells are continuous with those of the epithelial cells. Upon the lateral and anterior faces of the *filum terminale* at this point, the multipolar cells approach each other, and admit in the narrow intervals between them longitudinal fibres, to which they at length give place. The authors compare the results of their labors with former works on the same subject with reference to man and the frog, and conclude that the *filum terminale* of the adult frog resembles the human spinal cord checked in its development, so that each segment of the *filum* represents one of the successive phases through which the human cord passes in its primary formation.

The second part of the memoir has reference to the experiments which the authors made to determine the corresponding cutaneous and medullary regions (*territoires*) of the spinal nerves of the frog; a subject already handled by Peyer, Türk, Krause, Eckhardt, and Koschennikoff. The results agree more or less with those of the last-named author. They prove further that there is no root presiding exclusively over the perceptive (*consciente*) sensibility, and that the cutaneous region, the irritation of which provokes a perceptive sensibility, is for each nerve the same as that which can produce a reflex action; an observation which is opposed to Marshall Hall's hypothesis regarding the excito-motory fibres.

Passing to the medullary region of the posterior roots of the frog, the authors admit that all the fibres for perceptive sensations ought to end, directly or indirectly, in the brain; but there are centres, especially at each root, which regulate the reflex movements. Their results, as regards the position of the centres of reflex action, agree on the whole with those of M. Koschennikoff, but in detail they present marked differences, which the authors explain by the inconstancy both of the cutaneous regions and of the points of emergence of the roots. To avoid as far as possible the diminution of irritability consequent on so serious an operation as opening the vertebral canal, they made each experiment upon an uninjured frog, by a single cut, and then tested the persistence of the reflex excitability. An autopsy was subsequently made, and the distance measured between the cut and the emergence of the root. This last was rendered more visible by coloring the fibres with hyperosmic acid. We will not enter upon a description of the results obtained, but content ourselves with observing that there is a series of successive centres. The centre of each root commences immediately behind the preceding root, and ends immediately behind its own origin, being therefore upon a transversal line which joins the points of emergence. Behind the tenth pair the cord is not the seat of a reflex centre. The nerve cells of this portion send out sensitive and motor fibres towards the tenth pair, but the cells of these fibres do not communicate amongst themselves, as they would of necessity do if the reflex movements, which fail at this point, were present.

After these preliminary studies, the memoir treats of the anatomical and physiological researches, made by the authors, on the reproduction of the spinal cord in the frog. Schwann, from whose report on this memoir we have compiled this abstract, was the first who verified the reproduction of the nerve trunks in the frog; the reproduction of the cord had never been clearly proved by anatomical or physiological researches. Recently, M. Voit has shown that in pigeons, the hemispheres of the brain can be reproduced after extirpation. According to the authors, the want of success of the experiments upon the reproduction of the cord in frogs probably proceeds from the season, and the too great age of the animals. They have operated on little frogs full of life, and those experiments only which were made during the winter (that is from November to the end of February) were successful. The authors were not content with simply cutting through the cord, but they actually removed sections from one to two millimetres in length. After about six months the healing was complete, and all the functions had returned. These latter came back in the following order:—First, the spontaneous fibrillary movements in the thighs, then voluntary movement of the whole of the thigh, extending gradually to the knee and the foot. The perceptive (*consciente*) sensibility only appeared more slowly, and sensibility and the power of reflex motion were the last to present themselves. The autopsy and the microscopical examination of the reproduced cord showed that the end of the cord in front of the section was a little swollen, as in the case of nerves that have been divided; the posterior end was rounded, and between the two ends there was a substance, at first gelatinous, in which they found multipolar nerve cells, and nerve fibres in the form of Remak's fibres and varicose fibres. The cells appeared before the fibres. They found besides in this gelatinous mass, and in the two ends of the cord, near the point of section, nerve cells in a state of pigmentary degeneration.

Such are the principal results of this interesting work. It fills up a gap which existed in our knowledge of the reproduction of nerve tissue, and closes the list of numerous new observations upon the anatomy and physiology of the cord and spinal nerves of the frog.—*Med. Times & Gazette.*

ON A CHANGE IN THE URINE FROM THE EXTERNAL USE OF CARBOLIC ACID.[*]

By Augustus Almen.

In a former part of this journal, page 105, Mr. Waldenström has given an account of an altered appearance of the urine, &c., observed in some patients at the Academical Hospital, who were using a solution of carbolic acid in oil, either in dressing, or as an injection into abscesses, and he called particular attention to the danger of the occurrence of nephritis, and to the necessity for examining the urine during the employment of carbolic acid.

Although I have only a few very unimportant observations to make, which should most fitly be taken in common with the paper just referred to, yet, considering the practical importance of the inquiry, and the extremely unusual appearance the urine presented, I will say a few words on the method of determining the presence of carbolic acid in the urine.

The urine of various patients admitted to the hospital, had, after the use of the acid in question, a very dark, almost black, tar-like appearance. It was acid in re-action, turbid, and did not throw down any unusual deposit. The urine contained albumen, but not in any great or extraordinary quantity, in fact only to an insignificant amount. Blood could not be detected,[†] and the urine did not present anything unusual except its black tar-like color, and a peculiar smell. When no absolutely certain re-action of carbolic acid could be obtained, either with the urine itself or with the residuum after the ether, with which the strongly acidulated urine had been agitated, though the presence of carbolic acid was highly probable from the smell of the fluid, about 400 cubic centimetres (some 14 ounces) of the urine was strongly acidulated with sulphuric acid, and about a third part was distilled from an ordinary retort, with glass cendensing tubes. The distillate was as clear as water, colorless, smelt strongly of carbolic acid, and gave beautiful and undoubted re-actions of the same. For comparison, an analysis was instituted at the same time with distilled water, in which some drops of carbolic acid had been dissolved by agitation.

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[*] Translated from the "Upsala Läkareförenings Förhandlingar" (vol. v. part iii. p. 253), by J. W. Moore, M.B., Ch.M. Dub., L.K.Q.C.P. Ex. Schol. T.C.D.

[†] The most delicate, simplest, best, and a really practical test of the presence of blood in the urine, is that mentioned by me at the meeting of Naturalists in Stockholm, 1865 ("Proceedings of the Meeting, Stockholm 1865," p. 481), viz., the guaiacum test, which is most readily carried out in the following way:—Tincture of guaiacum (a solution in spirit of guaiac resin), and ordinary

The distillate and the aqueous solution of carbolic acid, when mixed with some ammonia, and, subsequently, chlorinated lime, assumed the same pronounced and beautiful blue color. Very thin chips of fir-wood (spruce fir), thoroughly soaked in the two liquids, and afterwards dipped into dilute-hydrochloric acid, and exposed to the sunlight, became with both mixtures beautifully blue, especially at their thinnest edges. The distillate, agitated with ether, and the clear ether evaporated in a watch-glass, left as a residuum oil-drops, smelling strong of carbolic acid, which, when mixed with water, and also when treated in other ways, for example with strong nitric acid, behaved like carbolic acid; although on treating them with concentrated sulphuric acid, then neutralizing with chalk and filtering, I was not fortunate enough to obtain with per-chloride of iron the beautiful violet color which is, without difficulty, got in the case of pure carbolic acid.

No doubt as to the presence of carbolic acid in this urine remained, and that its amount was not trifling, I conclude from the fact that the small quantity of urine which was subjected to distillation, afforded a distillate of which a small part, agitated with ether, left a not inconsiderable oily residuum. Although I have not instituted any comparative experiments with normal urine, I yet take it for granted that it does not contain carbolic acid in any such quantity as was the case in the present instance.

The unusual tar-like appearance of the urine naturally cannot depend on the presence in it of carbolic acid, and as urine so affected is not observed during the internal use of this substance, Mr. Waldenström's presumption, that it results from the presence of oxidized products of carbolic acid, formed even before the absorption of the acid, seems a very probable one. As is well known, carbolic acid and creosote have a great tendency to change; even when kept in well closed glass bottles they become tinged with a more or less reddish-brown color, and carbolic acid dissolved in water when treated with chromic acid (or with $\mathrm{K\ O^2\ Cr\ O_3 + SO_3}$) turns to a dark brown, not unlike the urine under discussion. It seems not improbable that the carbolic acid mixed with blood and pus should, on exposure to the air, and, perhaps, through the properties possessed by the blood of ozonifying and promoting acidulation, undergo a rapid and energetic acidulation with the formation of the dark products of oxidation, which, afterwards, along with the unaltered carbolic acid, are absorbed, and pass off in the urine. At an hospital an experiment could easily be instituted as to whether a little carbolic acid, mixed with similar pus, and agitated with exposure to the air, after some time assumes a dark, tar-like appearance. That the dark color is not developed after the water is passed, or while it is in the bladder, seems to me likely, from the fact that, if the urine is agitated with a little carbolic acid, and exposed, without shelter, to the air, neither its reaction nor its appearance is changed (it does not putrefy), and a smaller quantity of urine evaporates even without undergoing any noticeable alterations.

Sharing Mr. Waldenström's view, that a dangerous nephritis might possibly arise from the external use of carbolic acid, I yet

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turpentine in about equal parts, or from half to one cubic centimetre of each, are blended into an emulsion in a test-tube, after which, a small quantity of urine is added in such a way as to sink to the bottom in a separate layer. Whether the urine is normal or unhealthy, for example, containing albumen, but not blood, the emulsion undergoes no change until a rather long interval, but if the least blood is present in the urine, or if a drop of blood be added to it, the emulsion immediately on mixing with the urine becomes of a light-blue color, then darker, and finally the blue resembles a solution of indigo or Prussian blue, these changes varying in rapidity and intensity, according to the quantity of blood present. Many years' employment of this simple test has convinced me of not only its incredible delicacy, but also of its reliability. Neither normal nor ordinary albuminous urine, if free from blood, changes the guaiaco-turpentine emulsion at all in such a way that any doubt or uncertainty can arise as to whether blood is present or not; and this test for blood is for clinical purposes (not for medico-legal) simpler and far better than all others. How Terichman's blood-crystals may be obtained from urine and other fluids containing blood is mentioned in the same Proceedings, at page 482.

do not believe that we should therefore abstain from a judicious employment of it. The acid in question possesses, as is well known, unusual antiseptic properties, even when used in extremely minute quantity, and therefore I cannot imagine any advantage that is likely to accrue from employing it in so large an amount, and in such concentrated solutions as physicians appear to prefer. In my opinion its good effect depends less on the quantity of the acid than on a complete and general contact with the pus, and, doubtless, quite as good results might be obtained with much less acid. On the dressing a more dilute solution in oil should be the best, but for injection an aqueous solution appears to me the more serviceable, if it is brought into contact with the interior of abscesses, an end which is most readily attained by an injection of a large quantity of an aqueous solution of carbolic acid, which should subsequently be rinsed or squeezed out. Experiments with this solution, or even better with a solution in spirit, of which various quantities, according to various cases, may be added to the water used in washing, and to an injection fluid, would be of advantage.

From what is already known of the action of carbolic acid on the kidneys, it is then always our duty not to omit an examination of the urine for albumen, during even the external use of this substance, and this, too, even if the urine does not present any abnormal appearance.—*Med. Press and Circular.*

Medical and Surgical Journal.

Boston: Thursday, December 15, 1870.

IN MEMORY OF THOSE WHO DIED FOR THEIR COUNTRY.

It is a sad, but interesting record, which Dr. Toner, of Washington, D. C., gives us, in the October number of the *National Medical Journal*, of those physicians, now deceased, who served their country professionally, in the army and navy, in the War of the Rebellion. Before publication, the list was submitted to the Surgeon-General U.S.A., and the Chief of Medicine and Surgery U.S.N., and we may be sure it is as complete as such a list can well be on its first issue. It contains an amount of infeomation of the greatest value to the physician and the historian, and reflects the highest credit on its compiler.

We have learned to read with grateful respect the names of thousands in every grade of the service who gave up their lives for the furtherance of plans which only Omniscience could conceive and Omnipotence only could execute; which we feel to be still incomplete, but will be carried to their full development in the coming centuries. As members of the medical profession, however, we linger with warm regard over the record of *our own* men; who left us—with their lives in their hands—to bind up the wounds of their fellows, to brave contagion and malaria, and to undergo exposures, which each one knew might fix the seeds of disease of a necessarily fatal character; and all this with that devotion to humanity and to duty which makes a true physician's path a clear one. It is, then, with especial interest we of New England recall the forms, as we read the names of Bell and Fox, Davis and McLellan, of Revere and Sargent and Ware, Bryant, Hayward, Foster, Page, Gibson and a score of others. It was said of one of these by his fellow-prisoners in Richmond—but it might have been said of each one—"when he came, sunshine came with him, and when he went away darkness followed." "Killed in action," or "in the line of his duty," "died in rebel prison," or "of disease contracted in the service," these are the records which oftenest appear in our medical necrology of the war; honorable records, indeed, which it becomes us to emulate, as well as admire.

It is not in a spirit of fault-finding that we mention the occurrence of some omissions and some slight errors in Dr. Toner's list. Only to those who have undertaken such a list can the difficulties of the work be known. The preparation of a roll of honor is indeed like that of a dictionary of a new language. The omission of a name or a false date constitutes an error, and such errors are only to be overcome by successive editions. Our own experience in a work of a similar character has given us convincing proof of the liability to similar mistakes.

BURNING THE BODIES OF THE DEAD.

The Franco-Prussian war has given origin to a considerable number of inventions and innovations whereby former methods of warfare are doubtless improved upon, if, in such matters, anything can be deemed an improvement which has for its object the wholesale destruction of human life. Not the least interesting of the subjects suggested by the war is the disposition of the multitude of dead bodies left on the field of battle after a general engagement. The medical profession in Paris manifests an inclination to restore the ancient custom of burning the dead, as tending to prevent the evils of decomposition and other obvious or remote results. A recent number of the *Gazette Hebdomadaire* contains an editorial of considerable length devoted to a learned discussion of the subject in its historical and hygienic bearings. The Editor remarks:—"On its moral side the question is not open to controversy; it is to be determined by each individual concerned. For ourselves, in view of the great hygienic conditions involved, we should not hesitate to favor the burning of dead bodies. But it ought to be known if this innovation upon conventional forms is more useful or practicable than burial with the employment of disinfectant measures. The mode of burning is the real question to be determined."

With regard to the purpose of such a rite among the ancients with whom it was a custom, the Editor finds no evidence that it was suggested as a prophylactic measure in the interest of the public health. With the Greeks and Romans, who were the earliest, except the people of India, to practise it, the burning of the dead, both in civil and military life, was designed as a measure to prevent profanation; it was in some degree an honor or courtesy, derived so slightly from hygienic considerations that not infrequently funeral piles were built to departed spirits. Burial was still the essential rite, without which disembodied souls were condemned to wander miserably a hundred years. But, however slight the evidence may be that the measure was originally dictated in deference to public hygiene, the writer concludes that its value in this respect must have suggested itself "in the presence of the piles of dead bodies left on the battle-field, and generally accumulated in a small extent of territory."

Physicians as Witnesses and Experts.—Our brethren in California are justly indignant at the laws of their Commonwealth, which prescribe that "no witness in a criminal case shall receive any fee, whether a common or skilled witness, unless he takes oath that he is poor and unable to pay his expenses incurred in attending court." A subpœna to testify before the coroner or a justice of the peace, and in the courts, in any capacity, no matter under what expense or loss of time, gives no assurance of even the paltry pittance which is meted out to members of the profession at the East. A skilful expert is also obliged to give his time and experience, by attendance as a kind of supernumerary juryman; to listen to the evidence given, and then give his opinion in the case—and all this with no pecuniary recompense. This course of law is, to say the least, annoying, and should call for decided action by our brethren on the Pacific slope. It has, very wisely, been referred by the State Medical Society to a special committee, with a view to reforming the abuse.

Mr. Editor,—Who has the merit of ordaining that your valuable Journal be distributed with the leaves cut? It is a blessed institution—that operation of resection—at all events. Would that other periodicals might go and do the like–wise thing!
Yours truly, M. M. S. S.

Our "devil," to whom is deputed the duty of cutting the leaves of our exchanges, says "Amen!"—Editor.

Gun-Shot Wound of the Abdomen—Recovery. By W. E. Whitehead, M.D., Assistant Surgeon U.S.A.—J. B., born in Indiana, resident of Washington Territory, farmer, white, single, aged 17½ years, was accidentally shot September 2d, 1868 (A.M.), in carelessly withdrawing a loaded double-barrelled gun, with the muzzle toward his body, from a clump of bushes, where he had placed it for security. The gun was charged with a round, one-ounce leaden ball and a charge of No. 4 shot in each barrel; the ball was wadded with a cotton rag. The charge entered his body four and a half inches from the median line, and six and three-quarter inches from the superior spinous process of the ilium of the left side; the lower edge of the eighth rib was shattered; the ends of the ninth, tenth, eleventh and twelfth ribs were cut off entirely. Most of the charge passed out four inches from the spine, on the same side. After receiving the wound he walked several rods, sat down and waited half an hour for a wagon to arrive to take him home, a distance of five miles, and got into the wagon and rode home. He bled very freely till next day. No perforations of the intestines were manifested for a week, when the sharp, ragged ends of the ribs cut into the intestines, making in all seven or eight openings, through which fæces passed. For the first week or ten days he was not seen by a physician, and only once after, till he came under my notice three months from the date of the injury.

When first called to see him, about the middle of the month of December, 1868, I found him much reduced in flesh, with a free discharge of healthy pus from seven or eight fistulous openings at the seat of the injury; appetite fair; sleeps pretty well; bowels moved per anum every two or three days; considerable quantities of fluid fæces pass out at the openings. In February, he had a troublesome and painful cough, with shortness of breath and fever, which lasted for about six weeks—the result of a lobular pneumonia of the lower lobe of the left lung. From the time of the injury to the date when first seen by me, nearly a handful of small pieces of bone had been discharged from the wound, as also shots, rag, and a piece of flannel shirt. The urine was dark-colored during his entire illness, but was always passed freely. Treatment up to December had been such as was ordered by a hospital steward of the army: recumbent position with rest, cold-water dressings, cleanliness, and sol. potass. permang., as a disinfectant, with wine and morphia to allay pain. I only varied this plan of treatment by ordering a dressing of simple cerate, or mutton tallow, to diminish the quantity of anodyne daily, and a diet of good nourishing and easily digested food, with ale, brandy, or wine, as required.

When last seen—the latter part of the month of April, 1869—his condition was very much improved. He had gained flesh and strength; slept pretty well; only a small quantity of the most liquid of the fæces passed occasionally from the larger of the three remaining fistulous openings just below the eighth rib; he was able to walk about.

I consider this a most remarkable recovery, in view of the extent of the injury (nearly four square inches of the parietes of the abdomen having been shot away), the surgical, or rather the want of surgical advice and proper treatment; and can alone attribute it to his youth, good constitution, judicious and careful nursing of a devoted mother, and healthfulness of his surroundings, for his residence was upon the very shore of the Pacific Ocean, a few miles north of the Columbia River.—*Pacific Med. and Surg. Journal.*

Case of Complete Transposition of the Viscera. Reported by R. Burgess, M.D., Assistant Physician to the City Hospital, Saint Louis.—M. C., æt. 40, a native of Ireland, was admitted to the City Hospital August 15, 1870. He was suffering from entero-colitis, following upon alcoholism. On the 22d, he died, and, there being some obscurity in regard to the case, I made a *post-mortem* examination on the same day, and discovered that there was a complete transposition of the viscera.

The man was well formed, limbs symmetrical, height five feet three inches, breadth of shoulders sixteen inches, of hips thirteen inches, weight about 180 lbs., hair brown, beard black and short.

On laying open the abdominal and thoracic cavities, the organs presented the following appearances. The heart was upon the right side, with the apex pointing downward, forward, and to the right. The liver, being much enlarged, extended entirely across the abdominal cavity, touching the floating ribs at each side; but the larger lobe lay in the left hypochondriac region. The gall-bladder was also on the left side, two inches from the median line. The exposed portion of the stomach was seen to the right, just below the smaller right lobe of the liver. Hanging from the greater curvature of the stomach was the great omentum, much diminished in size, and covering a small triangular space formed by two portions of the colon. The colon lay altogether in the right half of the abdominal cavity, and presented on the surface two portions lying nearly vertically, attached to each other below, but diverging towards the upper part, the whole presenting a figure resembling the letter Y.

The left half of the abdominal cavity was wholly occupied by the small intestines.

Having viewed the organs as first exposed, I proceeded to dissect them. The portion of large intestine lying vertically just to the right of the median line proved to be the ascending colon, the caput resting upon the bladder. After tying the ileum at its entrance into the caput, the small intestines were removed, and were found to be attached to the vertebral column by a mesentery of the usual length. The duodenum, however, was found lying in an unusual situation. Beginning at the pylorus, which lay exactly in the median line of the body, it extended to the left a distance of three inches, being attached to the under surface of the lobus quadratus and gall-bladder. Then recurving upon itself two and a half inches, it was attached to the ascending colon at its posterior part. The course then lay backward and downward close to the vertebral column, and attached to it, for a distance of four inches. The intestine (now the jejunum) next took its course vertically upward a distance of five inches, and was attached to the first portion of the duodenum, near the gall-bladder. Then passing backward to the under surface of the liver, it coiled upon itself several times, and finally passed outward directly in front of the left kidney. The intestine to this point was without mesentery, and mostly without peritoneal covering, being attached closely to itself and surrounding organs by connective tissue.

The large intestine was next examined. Beginning at the caput cœcum coli, which rested upon the bladder, the ascending colon passed vertically upward just to the right of the median line of the body till it reached the lobus quadratus, to which it was firmly attached by a bridge of tissue covering the first portion of the duodenum. It then passed backward and outward, lying below the stomach and spleen. Then descending along the right lateral wall of the abdomen, it reached the right inguinal region, where it made a turn and was attached to the beginning of the ascending colon. Then ascending again, it formed the outer vertical portion of the colon. After reaching the height of the stomach a second time, it made another turn and descended along the right side of the vertebral column, and into the pelvis, forming the rectum.

The remaining organs of the body were examined, and the transposition was found to be complete. The heart was on the right side, the apex pointing to the right. The left side of the heart circulated the blood to the lungs, while the right side controlled the systemic circulation. The arch of the aorta curved from left to right, and the aorta itself descended upon the right side of the vertebral column. The ascending vena cava lay upon the left side of the vertebral column. The right common iliac vein crossed beneath the left common iliac artery, and lay to the inner side of the right common iliac artery. The left common iliac vein lay to the outer side of the left common iliac artery. The left lung was larger than the right, and had three lobes; the right lung had but two lobes. The diaphragm rose higher on the left side than on the right. The openings of the diaphragm were transposed, those for the aorta and œsophagus being to the right of the median line of the body, and that for the vena cava to the left. The stomach and its greater extremity lay towards the right side. The spleen was about half the normal size, and was situated in the extreme right hypochondriac region. The liver was hypertrophied but symmetrical, and lay with its greater extremity on the left side. The gall-bladder was to the left of the median line. The right kidney was higher than the left, and even the right testicle hung lower than the left.—*St. Louis Medical and Surgical Journal.*

MALPRACTICE SUITS IN TURKEY.—Turkey must be a pleasant place to practise medicine in—more especially as regards the military service. Charges of malpractice are settled by courts-martial there; and if they escape the testimony of surgical experts with microscopical eyes and analytical fingers, they do not seem, on the other hand, to trouble themselves about any pathological evidence at all.

The *Gazette Médicale d' Orient* relates the following episode in point:—A soldier having received a severe contusion in the end of one of his fingers, a physician and surgeon attached to the army, after at first endeavoring by co-aptation of the parts to preserve the member, were forced, by the occurrence of sphacelation, to amputate the phalanx involved. Shortly after this trifling operation, tetanus supervened, and the patient died. Thereupon the medical attendants are at once put in jail, and a mixed commission of military and medical men convened for their trial, the summary result whereof is, that their case calls for the enforcement of "Article 187 of the Penal Code," which decrees from six months to two years' imprisonment to any practitioner whose negligence is followed by his patient's death. Appeal is made to the Minister of War, who refers the matter to the Superior Medical Council of the Army, which body exonerates the prisoners from all blame; but, in spite of this, the "Dari-Choura" (whatever or whoever that may be) confirms the first sentence. And now the Imperial Society of Medicine of Constantinople humbly petitions His Highness the Grand Vizier, that he will permit the revision of the case by the High Court of Justice. Meanwhile, the unfortunate physician and surgeon remain in prison.—*N. Y. Medical Gazette.*

HYDROCELE IN A FEMALE. By E. P. BENNETT, M.D., Danbury, Conn.—Hydrocele in females is of such rare occurrence that most authors on surgery fail even to make mention of it, and many physicians claim that it never exists, and in an extensive practice of over forty years but one single case has come under my observation. This case occurred recently in a young married female residing in Putnam county, and was mistaken by a surgeon of some eminence for a case of inguinal hernia, who endeavored to reduce it, but failing to do so, pronounced it adherent and irreducible, and advised to let it alone. That such a mistake should have been made is not at all surprising, as it was a hydrocele of the round ligament, coming down through the inguinal canal, and occupying exactly the place of inguinal hernia, and closely resembling one. She subsequently came under my care, and upon inquiry I learned that about five years since a small tumor had made its appearance, which had slowly and steadily increased until it had attained its present size, which was about that of a turkey's egg. It had not been painful, was not attended with abdominal disturbance, had never receded when decumbent, and gave to the touch a feeling of fluid contents, instead of the doughy feel of hernia, and I therefore thought that, whatever it might be, it was not hernia; and upon a closer inspection I diagnosticated hydrocele of the round ligament, although it was not diaphonous. So sure was I of a correct diagnosis, that I at once proposed an operation, to which she readily consented; and with the aid of a professional brother, who coincided with me in my diagnosis, I proceeded to cautiously lay open the sac, when we found to our great satisfaction that we had not blundered in our opinion. The serous contents of the sac having been evacuated, I injected it with a saturated tincture of iodine, and she speedily recovered, without the supervention of a single unpleasant symptom.—*Med. Record.*

TREATMENT OF GONORRHŒA WITH TANNIN AND GLYCERINE.—Dr. Schuster states that tannin with glycerine at first forms a soft waxy substance, which soon becomes hard and brown, and melts in a moist atmosphere at the temperature of the body. Dr. Schuster has formed small pencils of this compound, which he inserts into the urethra of patients suffering from gonorrhœa. He has found the treatment by means of caustic injections (the abortive method) frequently to fail, and that it occasionally produces violent pain, inflammation, and hæmorrhage. On the other hand, the treatment with slightly astringent solutions cures the gonorrhœa within a period varying from four to seven weeks, but is often followed by a troublesome gleet. The tannin-glycerine rods employed by Dr. Schuster are from three to four inches in length, well rounded at the extremities, and consist of thirty grains of tannin, one grain of powdered opium, and a sufficient quantity of glycerine to form a pastille. These rods are hard in winter, and soft in summer. Before their introduction, they should be dipped in warm water. They are to be left for from five to ten minutes in the urethra, and then withdrawn. If, however, they be left in for an hour, or for a night, more or less pain is caused, and this appears to be due to a combination occurring between the tannin and the mucus or pus, which becomes hard, and acts like a foreign body. Dr. Schuster has had no case of orchitis following the use of these pencils, though he has thought it advisable to recommend the employment of a suspensory bandage, nor has he noticed any irritation of the bladder or prostate. In cases of gleet a rod may be left in for a few minutes, and speedy cure usually results.—*Lancet*, Oct. 8, 1870.

DEATH FROM CHLOROFORM.—O. K. Grant, of Brunswick, Maine, about 40 years of age, and of late a clerk in the Census Bureau in Washington, died suddenly Monday, from the effects of chloroform, which had been administered by Dr. ——, one of the ablest surgeons in that town, preparatory to an examination.

Medical Miscellany.

Annual Meeting of the Massachusetts Medical Benevolent Society.—The Society met at the house of the President, Dr. Shattuck, at 8, P.M., November 10th. The following were elected officers of the Society for the ensuing year:—President, Dr. G. C. Shattuck. Vice President, Dr. H. W. Williams. Treasurer, Dr. Francis Minot. Secretary, Dr. Hall Curtis. Trustees, Drs. W. W. Wellington, Cambridgeport; Charles E. Buckingham, Boston; Geo. H. Lyman, Boston; S. W. Salisbury, Brookline; W. W. Morland, Boston; Luther Parks, Boston; R. L. Hodgdon, Arlington; Henry J. Bigelow, Boston; B. E. Cotting, Boston. The Society then adjourned to partake of an elegant entertainment offered by its President. A number of invited guests were present, including gentlemen of the other professions.

Detection of the Adulteration of Quinine with Salicine.—Dr. Solenén, says the *American Chemical News*, has comparatively tested the degree of accuracy and sensitiveness of the different tests in use for the detection of the presence of salicine in quinine, which, if made with the view of fraudulent adulteration, will always be at least at the rate of one per cent. of salicine or more, because less will not pay. The author employed three kinds of sulphuric acid—viz.: the fuming, pure concentrated acid, free from arsenic and nitric acid; ordinary concentrated sulphuric acid of commerce, containing a trace of nitric acid; and, lastly, sulphuric acid to which, purposely, nitric acid had been added. A watch-glass having been placed on a sheet of white paper, and a drop or two of the acids above referred to (each in a separate glass) having been poured therein, a few crystals of the alkaloid (sulphate of quinine) were put on the acid; if pure, there is no coloration, but, even with 1-100th of salicine, the two first-named acids caused a distinct red coloration, which did not ensue with the acid containing nitric acid. This latter acid was not even colored by pure salicine.—*Medical and Surgical Reporter.*

Bayard Taylor on Quacks.—"I am not blood-thirsty, but I should feel little grief if the Indians were to pounce upon and carry off, beyond the reach of rescue, every agent of quackery who defaces the finest scenery of the road. Cannot the two great railroad companies prevent this outrage? At the Sherman Summit, along Green River, in Echo and Weber Canons, in the Humboldt Palisades—wherever there are noble masses of rock—you find them painted with the unclean shibboleth of the quack. Heaven forbid that I should mention *whose* bitters, or lotion, or dentifrices, thus proclaim the vulgarity of its advertiser; but I have vowed never to use any such bitters, or lotion, or dentifrices, and I advise all overland travellers to do the same. The sight of this vile defacement—which no other country in the world would tolerate for a day—was the only disagreeable circumstance of my journey to and fro.—*Pacific Med. and Surg. Journal.*

Bad Effects of Chloral.—A patient in Guy's Hospital, with aneurism of the thoracic aorta, being given half a drachm of chloral to allay pain and procure sleep, became unconscious immediately on the administration of the dose, with lividity and coldness of face and hands, and respiration only at long intervals, death seeming imminent for five hours. These symptoms passed off during the following day. In commenting on the case, Dr. Habershon remarked that it confirmed the opinion he had formed from observation of cases of pneumonia and bronchitis; viz., that chloral tends to cause bronchial and pulmonary congestion, through its action on the pneumogastric nerve, and that it should not be given where embarrassment to respiration is liable to occur.—*N. Y. Medical Gazette.*

To Correspondents.—Communications accepted:—Boston City Hospital Reports.—Discharge of Gallstones at the Umbilicus, with Dissection.

Pamphlets Received.—Twelfth Report to the Legislature of Vermont, relating to the Registry and Returns of Births, Marriages and Deaths, in the State, for the year ending Dec. 31, 1868. Pp. 134. (From Dr. L. C. Butler.)—A Contribution to the Medical History of New Hampshire. By A. B. Crosby, A.M., M.D., Prof. of Surgery in Dartmouth Medical College, &c. Pp. 32.

Married,—In this city, 8th inst., Dr. Z. B. Adams, of Framingham, to Miss Frances A. Kidder, of Boston.—At Lynn, 7th inst., J. H. Foster, M.D., of Chicago, Ill., to Mrs. Elizabeth A. Jewett, of Lynn.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending Dec. 10, 1870.

Cities and Towns.	*No. of Deaths.*
Boston	95
Charlestown	10
Worcester	12
Lowell	12
Milford	4
Chelsea	5
Cambridge	11
Salem	1
Lawrence	6
Lynn	5
Gloucester	3
Fitchburg	1
Taunton	3
Newburyport	6
Fall River	11
Haverhill	4
Holyoke	6
	195

Prevalent Diseases.	
Consumption	47
Pneumonia	14
Croup and Diphtheria	13
Typhoid fever	6
Scarlet fever	6

Holyoke reports three deaths from smallpox during the past two weeks.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Dec. 10th, 95. Males, 53; females, 42. Asthma, 1—bronchitis, 1—disease of the brain, 3—cancer, 2—consumption, 20—convulsions, 4—croup, 2—debility, 7—diarrhœa, 1—dropsy, 1—dropsy of brain, 2—"malignant fever," 1—scarlet fever, 4—typhoid fever, 1—intermittent fever, 1—gastritis, 1—disease of heart, 4—hernia, 1—intemperance, 1—intussusception, 1—disease of the kidneys, 1—disease of the liver, 2—congestion of the lungs, 3—inflammation of the lungs, 5—marasmus, 4—old age, 1—paralysis, 2—peritonitis, 2—puerperal disease, 3—purpura, 1—enlarged prostate, 1—rheumatism, 1—unknown, 6—whooping cough, 4.

Under 5 years of age, 32—between 5 and 20 years, 6—between 20 and 40 years, 22—between 40 and 60 years, 19—above 60 years, 16. Born in the United States, 61—Ireland, 29—other places, 5.

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Original Communications.

ON THE ETIOLOGY OF ACQUIRED DEAF-MUTISM, HAVING ESPECIAL REFERENCE TO THE EFFECTS OF SCARLET FEVER.

By CLARENCE J. BLAKE, M.D. Read before the Boston Society for Medical Observation.

IN a valuable paper upon the Etiology of Congenital Deaf-mutism, read before the New York Academy of Medicine in 1868, Dr. Roosa says:—"We may divide deaf-mutes into two great classes. 1. Those in which the deafness has occurred after birth, from some traceable cause, which is generally an inflammation of some part of the auditory apparatus. These are the so-called *acquired* cases. They form a very large proportion of the whole number, as is well known. In Ireland, quoting from Wilde's statistics, more than one half plainly belonged to the acquired; and other statistics exhibit the same proportion. The second class comprises those who are assumed to have been born deaf—the congenital cases. It would be interesting to note, did time and the occasion permit, the various causes which have produced these acquired cases, which do so much to fill our deaf and dumb asylums. We should find that very many of them were preventible, in the ordinary sense of the word, and that medical science has somewhat to reproach itself with, in the occurrence of so many of such cases."

In reporting the 41 cases of deaf-mutism which have come under my observation, I wish to consider particularly those belonging to the class referred to in the paragraph above quoted, and more especially the cases in which the loss of hearing is traceable to scarlet fever.

The statistics of deaf-mutism, as they are usually obtained, are eminently unsatisfactory. They are founded almost entirely upon the statements of non-medical observers, who do not appreciate the importance of giving careful answers to the questions in the census blanks, or who, through ignorance, are unable to answer understandingly, and the statements as to the cause of deafness and present condition of the patient are not substantiated by a proper examination. A glance at a series of these statistical returns, taking for instance the blanks issued by our own Board of State Charities, will show this very plainly. Such questions as concern hereditary tendency, intermarriage of relations, age at which the deafness was first noticed, and the present degree of hearing, are often left unanswered, and the probable cause is put down as "sores in head," "colic," "a burn," "a fall," "fits," "mother-marked," &c. Very little is contributed to our knowledge of the etiology of deaf-mutism by such replies as these, and the acquirement of a correct history of any case through the medium of the statistic blanks, or even by direct questioning, is rendered particularly difficult from two causes—1. It is by no means easy, without careful examination, to determine whether a child under two years of age is in full possession of hearing power or not, even a marked diminution of hearing readily passing unnoticed. 2. Should absence or decided diminution of hearing be noticed at that age or even later, the parents are prone to refer the affliction to some infantile malady, either because that event attracted their attention to the loss of hearing, or, as is often the case, there is an objection to admitting the probability of a congenital malformation. In Sir Wm. Wilde's Irish statistics about 50 per cent. of all cases of deaf-mutism are recorded as acquired. Hawkins* gives two lists, one of 255 and the other of 318 deaf-mutes, the proportion of acquired cases being 33 and 26 per cent. respectively. Dr. Roosa,† in a report upon the New York and Hartford institutions, finds 39 per cent. belonging to this class; and Mr. Toynbee, as the result of careful examinations in 411 cases, finds but 98 out of that number, or about 24 per cent., in which the deafness is the effect of different diseases acquired subsequent to birth. Of 265 cases reported to the Massachusetts Board of State Charities, but 94, or about 35 per cent., can be classed as non-congenital. These few reports show great discrepancy.

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* Hawkins on the Constitution of the Deaf and Dumb, pp. 22 and 23.

† Am. Journal of Med. Sciences, vol. liii. p. 399.

In order to arrive at any definite idea as to the cause of the deafness, it is necessary to first get the history of the case as clearly as possible, and then make a personal examination to determine the degree of hearing, the integrity of the nervous apparatus and the condition of the outer and middle ear. It is rather a peculiarity of deaf-mute children that they deceive themselves with regard to the degree of hearing which they possess, and, moreover, try to deceive others ; we have to be on our guard, then, against simulation, not of deafness but of hearing; care is particularly needed in testing the perception of sound conducted through the bones of the head that they do not mistake the thrill of the vibrating tuning-fork or the jar of the repeater for the sound. To determine this, after the ordinary test, the instrument should be brought in contact with the fleshy part of the neck or the shoulder ; if the patient still affirms that he hears the sound, we may infer that he was mistaken in the first place, for the sound is not readily conveyed to the ear through the soft structures, while the vibration is plainly perceptible at the point of contact. The attention of the patient being otherwise engaged, the hearing may be tested by loud noises—clapping of the hands, striking of a bell or repeater, or the upper tone of a prismatic tuning-fork, commencing first at a distance and gradually approaching ; should any perception be noticed, each ear may then be tested separately. To determine the perception of sound transmitted to the middle ear and labyrinth through the bones of the head, the tuning-fork may be employed, being held between the teeth and applied successively over the mastoid process, in front of the ear, at the apex and at the junction of the sagittal and occipital sutures. I mention this last point particularly, because I have sometimes found that the tuning-fork was heard here better than at the apex. Where there is no perception of sound entering the ear through the meatus, the "bone-conduction" may be tested by the sharp upper tone of the tuning-fork ; but where there is even a slight degree of hearing, the use of the lower tone, obtained by affixing the clamps, is advisable.

Following these tests, the ear is examined in the usual way. Sigle's speculum is very useful to determine the mobility of the membrana tympani in children, who cannot be catheterized or made to use Valsalva's method of inflation.

Of the 41 cases thus examined, all of those where the history gave no clue to the cause of deafness, and where the loss of hearing was noticed before the age of two years, or where, under the latter circumstance, it was referred to some one of the diseases incident to childhood, were put down either as congenital or doubtful, unless the ear showed positive traces of inflammatory action, thus excluding several from the list of acquired cases, which, nevertheless, numbered 17 out of the 41 or 40 per cent.

In 12 of the acquired cases, there had been perforation or destruction of the membrana tympani on one or both sides. In 13 out of the 17, the deafness was traceable to scarlet fever or measles, 11 of the 13 being scarlet fever, or 27 per cent. of the whole number having lost their hearing as the result of this terrible disease. In comparing these with the other acquired cases, we find that the marks of active inflammation in the middle ear are more decided, that there is more extensive lesion of the sound transmitting apparatus, and that there is less perception of sound.

In the first of the scarlet fever cases there was on each side a large cicatrix including almost the whole membrana tympani.

In the second, on each side, large perforation, with copious offensive discharge from the middle ear.

In the third, destruction of the membrana tympani on each side ; in one ear the ossicula were wanting, and in the other there was a polypus springing from the promontorium.

In the fourth, destruction of the membrana tympani on each side, with occasional copious and offensive discharge.

In the fifth, destruction of the membrana tympani on each side, on one side the membrane having been replaced by cicatricial tissue.

In the sixth, a thin, offensive secretion, filling the ear on one side, on the other a cicatrix.

In the seventh, large perforation on each side, the rim of membrana tympani remaining, fallen inwards and in contact with the opposite wall of the tympanum.

In the eighth, large perforation on one side, malleus and incus wanting, and stapes visible in situ.

In the ninth, destruction of the membrana tympani on one side, and a large cicatrix on the other.

In the remaining cases the membrana

tympani was either very concave and irregular, or else showed calcareous deposit or a small cicatrix. Of the other acquired cases, two had calcareous deposits, and two destruction or perforation of the membrana tympani. In the majority of the congenital cases, the membrane was either normal, or else abnormally concave, and slightly thickened. The meatus was normal, and the auricle well formed in all of the 41 cases. The scarlet fever cases were especially liable to increased secretion from the mucous membrane of the pharynx and nostrils, following exposure to cold, and in several there was enlargement of the tonsils. All of the 41 cases were over 5 years of age, and, with but two exceptions, could articulate, some of them only a few words, but sufficient to show that they were not really dumb. In reviewing our material, we find then that the deaf-mutism, in something more than one half of the cases, is due to remote causes, concerning which very little is known, over which we can have no direct control, and which do not come immediately within our province as practitioners of medicine and surgery. In the remaining cases the deafness is caused by injury to some part of the auditory apparatus, the result of diseases in childhood which generally come under the eye of a physican.

We find, furthermore, that in a large majority of the acquired cases, the disease has been scarlet fever, and that this affection has been the most destructive to the structures of the middle ear.

The first question that naturally arises is, What is the course of the disease in the ear? The second, Can the disastrous result be prevented? The answer to the first question helps us to the solution of the second.

The Eustachian tube, which serves both as drain and ventilating shaft to the middle ear, gradually narrows as it ascends, till at about an inch from the faucial orifice it has a diameter of but from 1 to 2 m.m.; it is lined throughout with mucous membrane, continuous with that of the pharynx and tympanum. In the latter cavity, the mucous membrane forms the inner coat of the membrana tympani, envelopes the ossicula, and serves both as lining membrane and periosteum.

The inflammation of the mucous membrane of the fauces, so common in scarlatina, readily extends to the middle ear up the Eustachian tube. The first result is closure of this passage at its narrowest point; meanwhile the inflammation set up in the tympanum gives rise to increased secretion, and finally suppurative discharge, for which there is no natural outlet but that leading to the mastoid cells. As the accumulation increases, there is pressure upon the fenestræ inwards, and upon the membrana tympani outwards; the latter shares in the inflammation, and in consequence of that and the increasing pressure, finally becomes perforated, allowing the fluid to escape into the meatus. When this happens, the membrana tympani sometimes almost seems to melt away, so rapid is the enlargement of the opening. Where the membrana tympani is naturally thick, or has become so from a previous inflammation, this stage may not be reached until there is an extension of the affection to the mastoid, or to the labyrinth. In the former case, we have an increased danger; in the latter not only that, but also the prospect of grave permanent injury.

The symptoms at the commencement are usually a sensation of heat and fulness about the ear, severe pain aggravated by movements of the jaw, tinnitus and diminution of hearing. An examination of the ear shows the inner end of the meatus somewhat reddened, the manubrial plexus congested, the membrana tympani sometimes more concave than normal, and if not thickened apparently reddened.

As suppuration sets in, the pain becomes more severe, the tinnitus and deafness increase, the membrana tympani, pushed outwards by the accumulated secretion, is of a deep red or dirty yellowish color, and the inner end of the meatus congested.

The perforation of the membrane and liberation of the secretion generally give immediate relief from the pain, sense of fulness, and the tinnitus (while the hearing is improved). This often does not occur, however, until the labyrinth has become implicated, or the attachments of the ossicula so far destroyed that the malleus, incus, and sometimes the stapes also, come away with the subsequent discharge.

The course of the inflammation suggests the treatment for the different stages, which must, of course, be modified according to the type of the original disease, and the general condition of the patient; but the readiest means of relieving the local inflammation is the application of leeches in front of the ear and over the mastoid process. In the second stage, when the purulent secretion is gathering within the tympanum, we have only to follow the course which nature points out, and anticipate the rupture of the membrana tympani by making a free incision, at the point of greatest prominence of the membrane, which shall be sufficiently large to offer a ready exit to the pent up secretion. By this simple operation, which may be performed with any long narrow-bladed knife, we not only relieve the immediate distress, but it may be the means of saving the hearing, or even the life, of the patient. The double function of the membrane lining the tympanum renders necrosis the very possible result of continued active inflammation. The fact that it forms the outer coat of the membranes of the fenestræ, and the inner coat of the membrana tympani, that it is reflected over the ligaments of the ossicula, as well as the ossicula themselves, and that its vessels anastomose largely with those of underlying structures, shows how easily it may communicate to the labyrinth, and to the sound transmitting apparatus, the inflammation which it has received from the pharynx, while in children the numerous anastomoses between the vessels of the tympanic mucous membrane and the dura mater, through the fissura petroso-squamosa, open the way for a later and still more dangerous complication. The paracentesis then is not only valuable as preventing destruction within the membrana tympani, but in that membrane itself it substitutes a clean cut through a comparatively healthy structure, which readily heals, for a large opening accompanied by the condition of the ear exhibited in the cases which have formed the particular subject of this paper.

DEFECTS OF OCULAR REFRACTION, &c.

(Continued from page 357.)

Lecture IV.—*Hypermetropia.*

In the last lecture it was seen that convex glasses are the appropriate remedy for presbyopia, a defect of the accommodation, which gradually progresses as years advance, and in general affects all persons. We come now to consider their use in a different affection, hypermetropia, to which only certain persons, comparatively few, are subject. This last is an anomaly of the *refraction*, conventionally so-called, and in consequence of it the *far-point* is removed, in a certain sense, farther from the eye, that is, to a position *behind* the eye. Although convex glasses are equally applicable as a remedy in both presbyopia and hypermetropia, the two latter must be carefully distinguished from each other; especially is it to be remembered that, though the presbyope does not in general need convex glasses till about the age of 45 years, the hypermetrope may require them at a much earlier period, even in childhood.

To the above statement of the comparative rarity of hypermetropia must be excepted the case of *hypermetropia acquisita*; this is a small degree of the anomaly, showing itself late in life in eyes previously emmetropic, and attributed to senile changes, probably in the density of the crystalline lens. The same cause tends to diminish the refraction a little in ametropic eyes late in life; that is, to increase the hypermetropia in eyes previously hypermetropic, and to diminish the myopia in myopic eyes.

The optical definition of hypermetropia is that state of refraction in which the focus for parallel rays is behind the retina; so that such an eye, in the absence of accommodative action, requires that a pencil of rays meeting the cornea should already be convergent towards the cornea, if they are to come to a focus on the retina. This is otherwise expressed by saying that the far-point is *behind* the eye; we have previously seen that the far-point is the point of origin or meeting of those rays which, in the absence of accommodative action, or when the refractive power of the eye is at its minimum, come to a focus on the retina.

In this definition are involved several properties important to be noticed:

1st.—Such an eye is *relatively too short*, its retina being nearer to the cornea than the focus for parallel rays is;

2nd.—Such an eye is *relatively weaker* in its refractive power, as it does not refract parallel rays enough to bring their focus to the retina;

3d.—It requires a certain amount of additional refractive power, to be supplied either by the accommodation, or by a glass lens, in order to bring parallel rays to a focus on the retina, that is, to adapt the eye for distinct vision of distant objects.

It is also to be noticed that the conventional measure of hypermetropia depends on the distance of the far-point behind the eye; we may measure this distance from some particular point, for instance, the anterior nodal point, situated about $\frac{1}{4}$ inch behind the cornea, and a convenient point of reference for certain purposes. If this distance is 10 inches, the amount of hypermetropia is $\frac{1}{10}$; if the distance is 20 inches, the amount is $\frac{1}{20}$; that is, the nearer to the eye the far-point (*when behind the eye*), the greater the amount of the hypermetropia.

If the amount is $\frac{1}{10}$, the glass to correct for vision of distant objects (supposing no accommodation active), is the convex whose focal distance is 10 inches plus the distance between the glass and the anterior nodal point; or, neglecting this latter, it may be said that glass $\frac{1}{10}$ corrects for distant objects hypermetropia $\frac{1}{10}$, as it gives to parallel rays such directions that the eye of itself without accommodation will refract them to a focus on its retina.

Apart from hypermetropia acquisita, hypermetropia is probably generally congenital, and often hereditary. It often depends on the comparative smallness of the antero-posterior axis of the eye-ball, the other dimensions being also smaller. The diminution in size is considered as owing to a defect of development, and this view is confirmed by the fact that in very high degrees of the anomaly we may find vision less than unity, even after the best optical correction by glasses.

A peculiarity of many hypermetropic eyes is that they appear to diverge, presenting an apparent divergent strabismus, even when the visual axes are properly directed. To understand this, it must be noticed that a distinction is made between the optic axis or axis of symmetry which passes through the middle of the cornea, and the visual axis, or line from the macula lutea to the object, supposing the eye looking at the object. This latter axis is not identical with the optic axis. Even in emmetropic eyes the visual axis intersects the cornea to the inside of its middle; and still farther inwards from the middle in hypermetropic eyes; and to such a degree as to cause the apparent divergence; the apparent direction depending in part, at least, on the position of the middle of the cornea.

We must now allude to an important division of hypermetropia into the *latent* and the *manifest*. It was seen above that in order to see distinctly a distant object, that is, to adapt itself for rays nearly parallel, the hypermetropic eye must either accommodate or have the aid of a glass lens. Of course it will at first accommodate instinctively; and as it does not see distinctly without accommodating, it will acquire the habit of so doing; a certain amount of accommodation will become a comparatively constant accompaniment of the eye. When we test such an eye to find its refractive state, it may not relax this amount of accommodation, or may relax it only in part, thus presenting a different apparent state of refraction from its real one. The difference between the real and the manifest is the *latent* hypermetropia.

Other divisions have been made according to the range of vision of the eyes; for instance, some hypermetropic eyes cannot without glasses see objects distinctly at any distance; others may without glasses see an object distinctly, but only by converging to a nearer point, seeing the object, therefore, monocularly.

A hypermetropic state of refraction may be due to other causes besides congenital smallness, or defective development of the eyeball; as, for instance, glaucoma, orbital tumors, or commencing choroidal tumors, these being of course more important than the optical symptom. According to Zehender, hypermetropia sometimes accompanies temporarily severe disease, such as "typhus" and pneumonia. An interesting special case of hypermetropia is *aphakia*, by which is meant the absence of the crystalline lens, or its removal from the optic axis; it presents a high degree of hypermetropia, together with absence of accommodation. This condition interests us as being the necessary result of the operation for cataract, but it may also be brought about by violence or disease, the optical state then being of subordinate importance.

Hypermetropia may be diagnosticated by the ophthalmoscope, or by trials of the vision with glasses. In the method by the ophthalmoscope, we are not dependent on the vision of the patient, except that a certain amount of vision is desirable in order that the patient may easily direct the eye conveniently for the examination. It is well to avail one's self of this method, because it is essential to use the instrument to answer other inquiries as to the presence of internal disease; for such disease would modify our advice with regard to glasses, as well as indicate other treatment. In the method by trial with glasses, of course, we depend on the statement of the patient of what he sees.

On the threshold of both these methods we meet the difficulty of latent hypermetropia, or unrelaxed accommodation. This we can obviate by applying to the conjunctiva a few drops of a solution of sulphate of atropia, gr. iv. to water fl℥i., about an hour before the examination. There are some objections to this means, as previously mentioned. We may often get a sufficiently correct result without it; yet, at times, it is desirable to resort to it.

In making use of the ophthalmoscope, we may promote relaxation of the accommodation by having the room quite dark, and without marked objects to attract the eye. We make use of the upright image.

Supposing the observer emmetropic, and adapted for parallel rays, and the patient not to accommodate, then the amount of hypermetropia is indicated by the convex glass through which the fundus is seen distinctly. The greater the degree of manifest hypermetropia existing, the stronger this glass would be. We therefore seek the strongest convex glass through which the fundus can be distinctly seen. Allowance must be made for the distance of this glass from the patient's eye, when we infer the amount of hypermetropia. If the observer is not emmetropic, he may consider the glass used as composed of two parts, one of which corrects his own ametropia, and the other indicates the patient's.

Again, another method is to use the simple mirror at a distance of several inches from the patient's eye. If the observer being emmetropic then gets a picture which appears to move in the same direction laterally as himself, it is probable that hypermetropia exists. The more easily and the farther off he can get this picture, the safer is it to infer hypermetropia; for, though in emmetropia, also, in similar circumstances we might get an upright picture, we should not so easily at a comparatively great distance, since the field of view would be smaller. We should thus learn the presence of hypermetropia, but not its amount.

We come now to the trial by glasses. The strongest convex with which the patient sees best in the distance indicates, if vision is normal, the amount of hypermetropia; if without atropine, the *manifest;* if with atropine, the *total.* If vision is normal, we infer simply hypermetropia; if vision is not normal, then we should look for other defect or disease, such as astigmatism or internal disease, inflammation, extravasations, amblyopia, &c.; and these might interfere with the exactness of the last test for the amount of hypermetropia. Opacities of the media may be looked for before testing the vision. It should also be remembered that the two eyes may not have the same refraction.

Again, we may try the vision for near objects. If the patient can read fine print through a convex glass $\frac{1}{8}$ distinctly at a distance considerably greater than 8 inches, he must be hypermetropic, since his eyes would then admit of being adapted for convergent rays.

Two important symptoms of hypermetropia are a form of asthenopia, or difficulty of prolonged use of the eyes on near work, reading, sewing, &c., and convergent strabismus. As to the former of these, after what has been said it will readily be conceived that it might easily occur. To adapt itself optically for a point at a given distance, say 14 inches, the hypermetropic eye must add to itself more refractive power than the emmetropic would be obliged to add for the same distance. This large amount of accommodation not being easily obtained while the eyes converge to the object, there is a tendency to converge to a nearer point, as thereby more accommodation can be exercised. But this excess of convergence would lead to double vision, which there is an instinctive tendency to avoid; and in order to avoid it, the externi muscles, it has been thought, are brought into action. Such eyes, then, must suffer from the increased effort to accommodate, and from the effort and pressure accompanying the increased action of the externi and interni recti muscles. Disagreeable sensations arise in and about the eyes. Finally, these efforts must be relaxed, vision becomes indistinct and the work must be temporarily suspended. It may, however, happen that the tendency to greater convergence accompanying the increased effort to accommodate is not counteracted by the externi. This is likely to happen if the visual power of one eye is considerably inferior to that of the other. In such case there would not be two equally good visual impressions to be combined, and therefore the influence of the motive of single vision would not be as strong. In such circumstances convergent strabismus is likely to occur in hypermetropic eyes, and we should expect the best eye to be directed to the object while the other turns inward from it.

But such a difference of visual power is not necessary in order for the strabismus to occur. The latter may be due to the externi being too weak to counteract the increased efforts of the interni; or it may simply be that easy and distinct monocular vision is preferred to the difficulties of keeping the two axes properly directed in the particular circumstances. If the two eyes are equally good there might be alternating strabismus; that is, sometimes one eye and sometimes the other would be directed to the object.

We thus see that in hypermetropic convergent strabismus the person affected gets a comparatively easy and distinct monocular vision, but loses the advantage of binocular vision. The double vision soon gets to be overlooked. It should be stated that the strabismus does not become confirmed at once, but that there is a period at first during which it is intermittent.

The principal treatment of hypermetropia is by means of suitable convex glasses. We may distinguish between near and distant vision and between young and old persons. Young hypermetropes having good accommodation will often be able to see well in the distance and with both eyes properly directed. In such case it is better not to wear glasses for the distance, because the eyes might become accustomed to the glasses so as not to see as well without them ; and this would often cause inconvenience. Besides, if the accommodation is sufficient, it is preferable to use this rather than a glass.

But the patient, though young, may not be able to see well in the distance without converging to a nearer point. Glasses are then indicated to relieve the eyes from excessive accommodation and thereby to prevent, if possible, the abnormal convergence from becoming developed into confirmed strabismus.

Again, if the young hypermetropic patient has, without glasses, only imperfect vision in the distance, and if the vision is improved by glasses, they are indicated. In this and the preceding case the glass for the distance is the one which corrects the manifest hypermetropia. As the patient learns to relax his accommodation more, a stronger glass than that first selected will be required.

If the young hypermetrope has much near work to do, as sewing, reading, &c., the symptoms of asthenopia, as explained above, may show themselves quite early in life, and convex glasses are indicated. The glass must be somewhere between that corresponding to the manifest hypermetropia and the one corresponding to the total hypermetropia. The first number might be too weak, as even with it the patient still labors under a disadvantage, namely, the latent hypermetropia. The stronger number, the one corresponding to the total hypermetropia, would be too strong at first, before the patient had learned to relax the accommodation to correspond to the glass. The suitable number, lying between these two, must be determined experimentally.

In advanced life the accommodation diminishes, and the manifest hypermetropia differs less and less from the total. It may happen then that a person with a moderate amount of the anomaly does not see well in the distance. He then requires for the distance the glass which corrects the manifest hypermetropia.

In considering the glasses required in such case for near objects, we must remember that we have to deal not merely with the original hypermetropia, but with presbyopia superadded. We may, therefore, take from Donders's table for presbyopia the glass corresponding to the age of the patient, on the supposition of emmetropia, and add to this the glass corresponding to the manifest hypermetropia. If the sum of the two does not suit, we must experimentally correct it.

When hypermetropia is complicated with intermittent strabismus, the latter may be treated, as previously stated, by convex glasses, with a view to remove the motive to the excessive convergence. Another subsidiary treatment has been advised, consisting in the gymnastic cultivation of the strength of the external recti muscles, the details of which, however, would better be given in connection with the subject of strabismus.

When hypermetropia is accompanied by confirmed convergent strabismus, the latter may be treated by tenotomy of the internal rectus (one or both, according to the case), this allowing the eye to turn out by a certain amount. The defect of direction or deviation of the axis is thus approximatively corrected. The perfecting of the correction, or the finer adjustment, must depend on the instinctive desire for binocular single vision. The operation, even with its modern careful execution and subsequent corrections, simply reduces the defect to such a degree that the remainder can easily be remedied by the natural force of the muscles, acting under the desire of binocular single vision.

A very important question now presents itself. After the operation for convergent strabismus with hypermetropia, what glasses are needed? It was formerly considered that the hypermetropia should be fully corrected. It has latterly been suggested that it may sometimes be better to only partially correct it ; for the reason that the new insertion of the tendon, farther back, the result of the operation, causes the respective muscle in turning the eye inwards to act at a mechanical disadvantage, in consequence of which the external rectus may become relatively stronger. There is then subsequently a certain tendency to diverge, which must be counteracted by calling into action the very process which at first caused the strabismus, that is, by leaving it incumbent on the eyes to exert a high degree of accommodation. Therefore it is advised in certain cases after the operation to only partially correct the hypermetropia.

DISCHARGE OF GALL-STONES AT THE UMBILICUS, WITH DISSECTION.

Case reported by J. B. S. Jackson, M.D.

In a former number of the Journal (Jan. 6th, 1870) Dr. Geo. W. Doane, of Hyannis, published an account of this case. The patient was an old woman, 80 years of age, and was attacked in December, 1868, with severe pain in the region of the liver, which continued about three weeks. About two weeks afterwards, a tumor appeared over the gall-bladder, and about the first of March it opened at the umbilicus and discharged a calculus. From that time until the following October, it was estimated that about one hundred calculi were discharged, but no more subsequently, at the time of Dr. D.'s report, though a free opening at the umbilicus remained until death, which occurred on the 30th ult.

The diseased parts were removed, and, at the request of Dr. D., they were sent to me by Dr. Pineo, of H., to be exhibited to the medical class. The liver was not much if at all enlarged, but extensively cancerous, and upon the anterior face of the right lobe there was a large and very deep depression. The gall-bladder was closely contracted about a calculus, of a rounded form, and about as large as the top of the thumb; and the fistula that led from it and opened at the umbilicus, was direct, and about the size of a small catheter. There were also two small, angular calculi in the gall-bladder, and two others in the cystic duct, which last was quite large.

In a note which Dr. Pineo sent with the specimen, he stated that the attachment to the abdominal wall was slight, but the organ adhered firmly to the upper part of the duodenum, and almost obliterated the passage. The stomach and intestines were apparently healthy.

December 15, 1870.

CASE OF CHOLERA INFANTUM WITH ANURIA FOR FIVE DAYS. RECOVERY.

By C. W. Stevens, M.D., Charlestown, Mass.

A child, aged one year, was taken suddenly, on Oct. 1st, 1870, with vomiting and diarrhœa. In the vomita were pieces of corned beef, which the mother had given to "harden her child." Oct. 4th, I was sent for, after the usual household remedies had been exhausted. Found the primary symptoms of Cheyne's hydrencephaloid disease. Not even a teaspoonful of water could be retained in the stomach, and there was an incessant diarrhœa of greenish mucus. Continual worrying. Ordered

Acetat. plumbi, gr. v.;
Acid acetic,
Tinct. opii, āā gutt. v.;
Glycerin, ʒiss.;
Aqua destill., ℥i. M.

One teaspoonful after vomiting.

One teaspoonful of cold barley-water was to be taken occasionally, and an enema of one tablespoonful of mutton broth every two hours.

Oct. 5th.—Had rejected both the barley-water and the lead mixture, but retained the enemata. Ordered

Hydrarg. chlorid. mitis, gr. i.;
Pulv. opii, gr. ¼;
Pulv. sacchari, gr. vii. Chart. vi.

One powder to be taken after vomiting. To take the froth of the white of egg and brandy nog.

Oct. 6th.—Second stage of spurious hydrocephalus—depressed fontanella, eyes sunken and rolled up, cold extremities, continual worrying, inability to rise from the cradle. Ordered hot bottles to feet and hot rum fotus to abdomen.

Oct. 7th.—Has vomited only once or twice. Has passed no urine for two days. Ordered two drops of spts. of nit. ether in a teaspoonful of barley-water, every half hour.

Oct. 8th.—Continued anuria. That it is suppression of urine as in cholera, and not simple retention, I assured myself by percussion. Ordered fomentations of hot cloths over the hypogastrium, and

Fol. buchu, ʒij.;
Sem. anisi, ℈i.;
Aqua, ℥viij.

One tablespoonful of the infusion every four hours.

Oct. 9th.—Stomach retains milk and water. Continued anuria. I gave at once six drops of paregoric, and ordered two drops to be given every half hour.

Oct. 10th.—The baby passed water for the first time in about four hours from the first dose of the paregoric. From this moment the child began rapidly to mend. I should add that mutton broth, oysters, and brandy and egg, had been regularly continued every day. I am of opinion that the paregoric was the most efficient aid in causing micturition. I was led to use it from the utility of camphor and opium in retention of urine.

Reports of Medical Societies.

BOSTON SOCIETY OF MEDICAL SCIENCES.

J. ORNE GREEN, M.D., SECRETARY.

June 7th, 1870. Dr. Knight in the chair.

Dr. Warren gave an epitome of Cohnheim's and Stricker's views on inflammation, accompanied by demonstrations on live frogs. A cornea, irritated by passing a thread through it, or by cauterization, soon becomes cloudy from the presence of pus-corpuscles in its substance, the corneal star-shaped corpuscles remaining normal. These pus-corpuscles vary in shape, owing to their power of contractility, and also change their position ; the corneal corpuscles, however, have not this power of contractility, and retain their normal appearance, except in very advanced stages of inflammation, when they become more granular, retract their prolongations, and vacuatæ appear in their protoplasm, thus showing that they play no very important part in the inflammatory process. Cohnheim, by a series of experiments, claims that these pus-corpuscles have found their way into the cornea from without, for the cloudiness, he says, begins in the periphery, and gradually extends towards the centre. By injecting aniline into a bloodvessel of the animal experimented on, he found many of these corpuscles to contain blue granules, and hence concluded that they were white-blood-corpuscles. He now began the study of the bloodvessels of the frog. Rendering the animal insensible by an injection of woorara, the mesentery was exposed, and laid over a circular ring of cork, and fixed beneath the microscope. He found that there immediately ensued a dilatation of the arteries and veins, and a diminution in the rapidity of the circulation. The clear border of the vessels on each side of the stream of blood which previously existed, now disappeared, the corpuscles filling the whole calibre. On this border of the veins, the white corpuscles collect until the whole surface is lined by a single layer of these cells. From the external wall small bud-like projections are now seen ; these vary in shape, increase in size, become attached to the vessel only by a pedicle, which finally disappears, and we see, external to the vessel, a colorless cell, which cannot be distinguished from a white blood-corpuscle. The contractile amœboid movements of the white blood-cell begin as soon as it is arrested in the circulation ; it can be caught in all stages of passage through the vein wall, and is sometime divided during this passage into two parts. Examination of the normal epithelium lining the vessel shows stomata between its cells, and by dilatation of the vessels these openings become large enough to allow the passage of blood-corpuscles into the outer layers of the vessel-wall, and from here, by these amœboid movements, they can readily insinuate themselves in all directions. The red corpuscles do not have these movements. During all these changes in the bloodvessels the nuclei of the connective tissue and epithelial cells remain unchanged.

In organs where the capillaries are very numerous, these vessels take part in the process, and red-blood-corpuscles are sometimes mixed with the exudation, the force of the stream of blood having probably ruptured the wall. Cohnheim concludes from his experiments that the pus-cells are derived from the blood ; that some *do* come from the blood he considers proved. According to his theory, bloodvessels are necessary for inflammation ; injection and hyperæmia are the first stage of the inflammatory process. In vascular organs, this injection and hyperæmia occur in the vessels of the organ, in non-vascular organs in the vessels in the neighborhood, the pus-cells reaching the organ through the lymphatic canals. Cartilage is the only tissue which has no bloodvessels and no lymphatic canals ; in this no genuine suppuration has been seen.

Stricker claims that the white corpuscles of blood are not the only source of pus-cells. He says the pus-cell itself proliferates, and that this is the source of the greater mass of pus-corpuscles ; epithelium and connective tissue corpuscles and muscle cells he claims also multiply themselves, and hence he considers that pus is derived from all these various sources. In inflammation, according to Stricker, we have local disturbance of circulation, increased exudation of the fluid and formed constituents of blood, disturbance of nutrition, and consequent growth of cellular elements. The irritation of an injury Stricker considers as transmitted not from cell to cell, as Virchow supposed, but as acting on the vessels, disturbing circulation and so the nutrition.

The mass of the pus-cells Dr. W. considered to be formed from the white blood-corpuscles, which leave the blood in vast numbers, and multiply indefinitely after their exit.

The mesenteries of frogs, prepared according to Cohnheim, were shown by Dr. W., and an opportunity given to see the inflammatory process which had been going on for some hours.

Dr. Ellis did not consider that the foundation of the question of inflammation was by any means settled; if proliferation from connective tissues was even once possible, as claimed by Virchow, he thought we must deny the necessity of bloodvessels in the inflammatory process.

Dr. Dwight said that Cohnheim's statement, that the cloudiness begins on the periphery of the cornea, had been denied by some authors, who claimed that pus was first formed in the centre; in that case the pus-corpuscles must come from the corneal elements.

Dr. Jeffries stated that Wharton Jones, in Guy's Hospital Reports on the "Failure of Sight from Railroad and other Injuries," said that he had never been able to see the white corpuscles pass through the walls of the bloodvessels; that he did not agree either with Virchow or Cohnheim.

Dr. White mentioned a case of leucocythæmia, in which the autopsy revealed two large collections of pus-like matter (one containing more than a quart), which had formed without any apparent inflammation.

Dr. Ellis stated that Ranvier, of Paris, speaks of the escape of white blood corpuscles forming collections in leucocythæmia, and mentioned a case which came under his own observation many years ago, in which the white corpuscles had collected in such quantities in the veins as to resemble an abscess.

Dr. Ellis then read a paper on the general dissemination of disease, and the connection of the organs with each other, since published in this JOURNAL, Oct. 13, 1870.

Dr. Webber thought that many facts in Dr. Ellis's paper were dependent on the laws of nutrition. He did not consider that the cell and nerve theories explained all the known facts of disease, and thought that the collection of such papers as that just read would gradually show the connection and sympathy between different organs, some few of which are already known. He considered that the nervous system played a prominent part in this connection of the organs.

Dr. White suggested that Dr. Ellis, in his paper, had laid too little stress on the chemical processes which help produce the changes spoken of.

Dr. Dwight thought that the ganglia of the pneumogastric would give a connection between many of the internal organs and the brain, and would explain the facts mentioned by Drs. Ellis and Webber of patients with long standing disease of brain dying with disease of lungs. The pneumogastric, he said, had more numerous and intimate connections than even the sympathetic.

Dr. Greenough considered that the original cause of disease, whatever it was, might affect both lung and brain, and he did not consider it necessary to suppose that one disease followed the other.

Dr. Ellis did not agree with Dr. Greenough.

Dr. White showed some very perfect octahedra of the sulphate of strychnia, and explained the method by which they were prepared. To detect the alkaloid poisons, it was customary to dissolve the suspected substances in alcohol and acid, neutralize and then dissolve out the alkaloid by some solvent, usually either ether or chloroform. Chloroform was the best solvent for strychnia, but by shaking it a jelly was formed, in which it was difficult to find the crystals. By using benzole, however, as in this case, instead of chloroform, we avoid the jelly, and get a more powerful solvent of the strychnia than ether.

On evaporation more perfect crystals are also found than from the chloroform solution.

Medical and Surgical Journal.

BOSTON: THURSDAY, DECEMBER 22, 1870.

ANNUAL REPORT OF THE SURGEON GENERAL, UNITED STATES ARMY.*

THE Annual Report of the Surgeon General includes the usual statistics of the standing army, representing at the present time an average mean strength of 29,022 white and 3407 colored troops. The statistical tables, as would naturally be expected, give in full much valuable information and show evidence, as we are fully confident, of a large amount of hard work by Drs. Crane, Otis, Woodward, Billings and others.

A great many of the members of our profession are entirely ignorant of the fact that in the Surgeon General's office at Washington, and in the Army Medical Museum, there is annually performed a large amount of very valuable scientific work. Many of us are in possession of the entire series of monographs from that office, but many are also unaware that the publications issued since the close of the War of the Rebellion are unsurpassed in the history of military medicine and surgery, and are so acknowledged by the most distinguished men of every country. We wish me might have space to lay before our readers some of the testimony to the worth of these volumes given by such men as Sédillot, Longmore, Larrey, Legouest, Romberg, Didot and others ; but must confine ourselves to the report proper, from which we make liberal quotations. We feel it due to the gentlemen at Washington to state what they are doing in behalf of the profession.

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* Annual Report of the Surgeon General, United States Army. Washington, D. C. 1870. Pp. 10.
Memorandum referring to Extracts from Letters, Reviews and Bibliographical Notices of the Publications of the Surgeon General's Office. Washington, D. C. 1870. Pp. 18.

"The printing of the medical volume of the first part of the Medical and Surgical History of the War is near completion. This volume embraces the statistical tables representing the sickness, mortality and discharges from service on surgeon's certificate of disability, of *white* and *colored troops* during the war, and will be a work of nearly seven hundred and fifty (750) pages, quarto. To secure accuracy, the tables were stereotyped as they were finished, and before finally sending them to press they have been thoroughly revised throughout, and every effort made to attain accuracy. With this volume will be bound the appendix to the first part of the Medical and Surgical History of the War, containing the reports of medical directors, and other appended documents—about four hundred (400) pages.

"The whole of the manuscript for the surgical volume of the first part of the Medical and Surgical History of the War, authorized by the Act of Congress, approved March 3, 1869, is now prepared, and several of the more important subjects that would belong to the second volume, as, for example, the tabular statements, discussions, histories of typical cases (with illustrative wood-cuts and lithographs) of twenty-nine thousand five hundred and seventy-two (29,572) cases of amputations, and four thousand seven hundred and seventy-five (4,775) excisions, are nearly perfected. Besides this, the surgical statistics of the Army for the five years succeeding the war have been consolidated and arranged for publication, and much information has been furnished to authenticate just claims of applicants and to defeat those that were fraudulent under the Act of Congress authorizing the issue of artificial limbs to mutilated soldiers and seamen. The effect of this law, in bringing to Washington a large number of pensioners to present their claims, has permitted the study of the remote effects of injuries and mutilations. The peculiar value which the surgical data of the late war have acquired in consequence of the measures taken to trace the ulterior results of the more important cases cannot be over-estimated. In the reports of the surgery of European wars, and of campaigns in India, Abyssinia and elsewhere, the history of cases terminated when the men were invalided or discharged. Although the elaborate reports of the casualties of the French armies in the Crimean and Italian Wars were published in 1865 and 1869, after an interval of ten years from the conclusion of hostilities in each case, no information is given subsequent to the date of discharge or pension. * * *

"The collections of the Army Medical Museum were augmented by the additions of one hundred and nineteen (119) specimens to the surgical section, seventy-three (73) to the medical, seven hundred and sixty-six (766) to the microscopical, one hundred and sixty-nine (169) to the anatomical, one hundred and forty-four (144) to the section of comparative anatomy, and eleven (11) to the miscellaneous section. The number of catalogued specimens at the date of my last annual report was twelve thousand two hundred and twenty (12,220), and is thus increased to thirteen thousand five hundred and two (13,502). Great success has been obtained in the microscopical section in the direction of photomicrography.

"There has been a very steady and uniform increase in the various collections of the Army Medical Museum. The Indian hostilities, and the accidents of the field and camp and garrison, have afforded the opportunity of collecting some illustrations of the injuries inflicted by weapons—a class of specimens in which the Museum is already surpassingly rich—but the more numerous contributions to the surgical section have been of specimens illustrating pathological processes, or the remote effects of injuries.

"The collections now include eight hundred and ninety-seven (897) human crania, and (34) skeletons. Elaborate tables have been prepared, exhibiting their measurements. The diameters, facial angle, internal capacity, and position of the *foramen* *magnum* are indicated for each cranium. It is hoped that the publication of this important contribution to anthropological knowledge will be authorized by Congress. The tables, arranged to correspond with those published in the *Crania Americana* of Samuel George Morton, would worthily supplement that great work. The Museum possesses a larger number of skulls from tumuli, and of crania of North American Indians, than are elsewhere collected, and it would appear due to ethnologists throughout the world that descriptions of the specimens should be published, as was done by the Russian Government for the collection of Professor von Baër at St. Petersburg.

"Thirty-six (36) quarto volumes, each containing fifty (50) photographs of surgical cases, with descriptive letter press, have been distributed to the principal medical schools and societies in this country and Europe. The expressions of appreciation with which they were acknowledged by the leading surgeons of New York and Philadelphia, of London, Paris, Berlin and Vienna, are a legitimate source of gratification, as evidences of the success of this office in making known to the surgical world the 'dearly bought lessons of the war.'

"The relations of the museum with other institutions, with a view of interchange of specimens, have been extended. A valuable series of casts of anatomical specimens was received from M. Quatrefages, of the College of France. Specimens have been exchanged with mutual advantage with the Smithsonian Institution, the Agricultural Bureau, the Museum of the College of Physicians of Philadelphia, the Museum of the New York Hospital, the Peabody Museum at Cambridge, the Blackmore Museum in England, and the anatomical collection at Oxford, England.

"Thirty (30) volumes of photographs, and many duplicate osteological specimens and plaster casts, are now on hand for exchange.

"It is scarcely necessary to adduce proofs of the practical utility of the collections of the Army Medical Museum. Besides affording a field of study for medical officers, indispensable to the acquirement of the fullest knowledge of the special duties required of them, the illustrations of military surgery and of camp diseases contained in the cabinets have greatly promoted general professional knowledge on these subjects; and it is noticeable that, in the standard systematic work on surgery by Billroth and Von Pitha, in the last edition of the English System of Surgery by Holmes, in Didiot's 'Service de Santé des Armés,' and in nearly all works on military medicine and surgery printed in the last five years, the majority of the wood-cuts are derived from the specimens in the United States Army Medical Museum.

"It is a matter of gratification that, as the purposes of the museum have become more widely known, many field and line officers of the army, and many practitioners in civil life, have sent contributions to it. Many donations of natural history specimens, of stone implements, and objects of archæological interest have been received, and have been very valuable as articles of exchange with other museums, for objects more strictly pertaining to the province of the Army Medical Museum."

IRON COTTAGES AND HOSPITALS. — Mr. Jones, of Aspatria, England, has designed a movable metal cottage, which he proposes to use for hospital purposes. He recently displayed a model of his design at the meeting of the British Medical Association. Such a building could be put up in sections at short notice on the occurrence of an epidemic, or even for a permanent hospital. It is questionable, however, if the plan proposed could be employed with advantage in our cold climate. Personally, we have felt convinced that the most satisfactory building for hospital purposes is the modern barrack hospital employed in our late war: because, in the first place, it approaches most nearly to the tent or the open-air system of treatment; and, secondly, because its cheapness will allow of its removal and destruction every two or three years and its replacement by a new construction. Practically, however, it cannot be supposed that such a system would be adopted in a city, or in any position where permanence and architectural display are considered superior to the well-being of the patient.

ON Sept. 30th, Staff Surgeon Dr. Kemperdick experimented in Berlin with a new chirurgical instrument, the electric bullet-seeker, constructed from an English model by a surgical instrument maker in that city. It consists of a probe formed of two thin and very flexible metal rods, which terminate below in a knob. Each of these rods is covered with silk thread from top to bottom, so that they are completely isolated from each other; besides this, they are wrapped up together in an outer layer of the same material and varnished. The whole thus presents the appearance of a bougie, with a metal knob at one end. The instrument is now brought into connection with an electric chime; and when the knob, which forms the two poles of the apparatus, comes in contact with a metallic body, the isolation of the two rods ceases to exist, the electric circle is completed, the apparatus comes into action, and the hammer strikes the bell unceasingly. At the first trial, Dr. Kemperdick succeeded in finding a ball lodged in the bones of the foot, which had been vainly sought for during six weeks; thus taking the first step toward the radical cure of the patient.—*Army and Navy Journal*, Nov. 5, 1870.

The instrument described above is the same as was shown and described by Dr. Bowditch, at the last meeting of the Suffolk District Medical Society.

INTUSSUSCEPTION IN AN INFANT CURED BY INFLATION OF THE BOWEL.—W. S., aged six months, admitted into Guy's Hospital March 28, 1870. The child appeared in perfect health until yesterday afternoon about four o'clock, when, while sucking a crust of bread, he suddenly screamed out, fainted, and became cold. The mother took him to a doctor, who gave him a powder, which made him very sick. He continued in great pain, and cried incessantly. At three o'clock this morning he passed a quantity of clotted blood per rectum, and this continued to run from him until he was admitted into the hospital, at 12 o'clock. The last fæcal evacuation took place at noon the previous day.

On admission, the child was seen to be well grown, but face pale, and had a generally collapsed appearance. On examining his abdomen, a lump was distinctly felt to the left and above the umbilicus, which hardened when pressed upon. On passing the finger up the rectum, a round projection could be felt about four inches up, with a circular orifice in the centre. The finger, when withdrawn, was covered with blood. The case being thus clearly one of intussusception, Dr. Wilks ordered inflation of the bowel by means of a bellows. Chloroform was given, and an enema tube passed into the rectum, the other end being attached to the bellows. The attempt to inflate was at first unsuccessful, owing to the large size of the rectum; but by increasing the width of the tube by wrapping a strip of lint round it, the colon was well inflated, and then the lump gradually went back until it quite disappeared. A drop of [tr. ?] opium was ordered in a drachm of dill-water, and the breast to be given sparingly.

On the following day, March 29th, no lump could be felt. The child had been sick several times, and nothing had passed per rectum. To repeat the medicine.

March 30th, child very irritable; apparently much tenderness over abdomen, especially toward the right side. Occasionally sick. Passed a little blood, but no fæces.

31st, evidently better. Had a liquid evacuation with no blood, and sucks well.

April 1st, passed a natural motion, and altogether better.

2d, child apparently well, and taken out by the mother, who was somewhat discontented at the operation performed on him, as she never could be made to realize the severity of the case.

He remained well until the 10th, when he was brought to the hospital, having had fresh bleeding, and the lump could again be felt. The mother would not allow the child to be again taken in for the purpose of a renewal of the method which had been before so successful, but took him away for the purpose of procuring some physic for him; and no more was heard of the case. —*Lancet*, May 21, 1870.

ASYMMETRY OF THE TWO HALVES OF THE BODY. By Prof. HUMPHRY.—The Professor describes a young woman, aged 20, who was brought to him as a patient. He remarked on the peculiar appearance of the face, and was informed by her mother that she was born so and with one arm longer and larger than the other. On careful investigation, the whole of the right side of the body was found larger than the left; the difference being most marked in the upper limb, which measured, from the acromion to the end of the little finger, two and a half inches more on the right side than on the left. In the lower limbs the difference was but half an inch. Other measurements gave a proportionate difference in the length and girth of the several parts of the limbs.

The right mamma is seen to be a good

deal larger than the left, and the right cheek and jaw seem as if swollen in comparison with the left. In fact, the crown is higher, the chin lower, the forehead and occiput more prominent, the cranial circumference a half incher greater, and the teeth less crowded upon the right side. The raphe of the lips, chin and tongue are to the left of the median line; the right half of the tongue forms the tip, and the right tonsil is larger. The right eye, owing to its "backwarder" situation in the orbit, and to the fact of the lids not being opened as widely as on the left side, *appears* smaller.

She is right-handed, is decidedly stronger with the right side, and presents no abnormality of function in any respect, nor any evidence of previous disease, the trouble which she wished cured being merely an affection of the scalp.

The only similar case which the author finds recorded is one by Broca. The subject was a boy, aged 11, in whom the left half of the body exceeded the right so much as to give the impression that he was formed by the union of two halves from two persons of different size and strength. For the distance from the crest of the ileum to the internal malleolus, the left side was superior to the right by 5·5 centimetres; from the acromion to the styloid process of the radius, by 2 centimetres. The measurements of the head differed correspondingly; the hearing of the left ear was much more acute than with the right, and the left eye more open than the right. The difference in this case also was congenital. —*Journal of Anatomy and Physiology.*

New Operation for Erectile Tumors.—At a recent meeting of the Belgian Academy of Medicine, M. Michaux gave an account of a new mode of procedure he had adopted for the treatment of erectile tumors. During the thirty-four years that he has been engaged teaching clinical surgery at Louvain, he has had abundant opportunities of putting the various modes of treatment, that have been recommended from time to time, into force, and has communicated the results to the Academy. The present plan, which he regards as preferential to all others, consists in a combination of Guersant's *cautérisation actuelle parcellaire* with the employment of the perchloride of iron. He had heretofore frequently had recourse to this mode of cauterization, and found himself obliged to have recourse to the perchloride in order to arrest the hæmorrhage which ensued on the cauterization. He soon, however, remarked that this application contributed greatly to the cure of the tumor, and therefore he resorted to its use in cases in which the cauterization gave rise to no bleeding.

"At the present time this is the way in which I treat erectile tumors, whatever may be their description, seat, or size:—With one of Guersant's needles, heated to whiteness, a track is practised on the tumor, either directly or by piercing the skin at a certain distance from it. Several needles may be placed in the same track, but that is not indispensable. As soon as the cautery is withdrawn, I substitute for it tents of charpie, soaked in perchloride of iron, and prepared beforehand. I thus plug the aperture until no more blood flows, and have the charpie *in situ* until suppuration is well established. I then replace these tents by others, taking care to increase the detachment, and repeat this dressing every day or every other day, according to the amount of suppuration. In this way I destroy entirely the erectile tissue, invading it in every direction with the charpie soaked in the perchloride. If the tumor is very large, several punctures may be made; and if cutaneous arterial spots (*taches*) persist, they may be painted with the perchloride or cauterized by Guersant's needle."

M. Michaux observed, in conclusion, that the practice was a certain one, unattended with danger, and easy of execution; while the same results are not obtainable either by using the caustic alone or by the injection of the perchloride—this last being sometimes dangerous by producing gangrene.—*Med. Times and Gazette.*

Cruveilhier's Atrophy. — The Medical Society of the College of Physicians of Ireland held its first meeting on the 16th of November. The President, Dr. Banks, read a communication on "Cruveilhier's Atrophy." The first case he detailed was under his care since 1858, and he had published the facts in 1860. The subject was 34 years of age, came of a very healthy family. Having caught cold, he commenced to suffer from persistent pain in his right arm, which after some time resulted in weakness in his right thumb, extending afterwards to the right, and subsequently to the left. Examination showed considerable atrophy of the muscles of the arm and hands. The treatment in hospital consisted in the application of electro-magnetism, and the internal administration of syrup of phosphate of iron, quinine and strychnia, which was attended with considerable benefit, that remained established for some years, and until he suffered from a severe sickness, since when he steadily got worse, his lower extremities became paralyzed, and he is now in a moribund condition. The second case was that of a lady, whose father had been the subject of locomotor ataxy, and had died of apoplexy. The treatment was similar to that adopted in the previous case, but without the least effect, the disease commencing in the thumb, and in fifteen months involving the lower extremities. In the last stage of the malady there was a very marked difference in development between the face and other parts of the body. Hyperæsthesia is one of the prominent symptoms. In the third case complete recovery resulted, although the symptoms had reached so advanced a condition, that the patient was able neither to write, feed himself, or walk. Dr. Banks quoted three other cases, in one of which the symptoms had made no advance for six years, while in the others the progress was rapid, the disease commencing in the left leg in one, and in the left arm in the other. He remarked that up to a recent date this disease was considered absolutely incurable.

Sir Dominic Corrigan considered that it was not necessary to assume any lesion of the spinal cord as the cause of the local paralysis. He narrated the case of a gunner on board ship, who, at the age of 33, became disabled, suffering from complete atrophy of the deltoid. In this case he had failed to discover the least central disease. Sir Dominic Corrigan had treated the case by stimulation of the capillary nervous system with perfect success.—*Med. Press and Circular.*

A New Method of Effectually Remedying the Defect of Hare-lip.—Dr. Wm. Stokes, Jr., Surgeon to the Richmond Surgical Hospital (*Dublin Quarterly Journal*), presents, with plates, an ingenious operation for remedying the congenital malformation called hare-lip, which prevents the formation of a notch ; also gets rid of the chance of that defect subsequently occurring. By his operation he gets rid of all the defects of other procedures, in which, in part or entirely, the principle of the utilization of parings has been adopted. For—

First. No subsequent curtailment of the projection at the lower extremity of the cleft is necessary.

Second. The procedure is applicable to all forms and varieties of hare-lip.

Third. There is no chance of portions of the soft tissues perishing from any twisting of them.

Fourth. There can be no subsequent puckering.

Fifth. There can be no subsequent notch, as previously mentioned.

Sixth. The possibility of any vertical sulcus or groove in the line of the cicatrix is also prevented, which is the case after Sédillot's, Malgaigne's, Samuel Smith's, and other operations.

(The reader is referred to the author's extended remarks upon the operation, accompanied with cuts, which are so interesting and connected that we should do injustice to Dr. Stokes by making extracts.)

As regards the time which is best for the performance of operations remedying this defect, surgeons are much divided in opinion ; some eminent operators maintaining that where it is possible all such operations should be performed before dentition, while others hold that better results are obtained in all cases where the procedure has been deferred until a later period. His experience leads him to adopt the views of the latter class, and his reasons are as follows :—*First.* That the structures at the period of life previous to dentition are so weak, soft, and pulpy, they are ill able to bear the continuous pressure of the needles and sutures, and that consequently they are specially liable to the occurrence of ulceration and the subsequent formation of transverse cicatrices. *Second.* The hæmorrhage, which, even though it be extremely slight in amount, is, in very young subjects, fraught with some danger. *Third.* There is much difficulty in executing any of the plans that have been devised for the avoidance of the defects which sometimes subsequently occur. In support of his opinion he has the high authority of his colleague, Mr. Adams, and the late Dr. Samuel Maclean, who went so far as to assert that, if possible, in all cases operation should be deferred until after second dentition.—*Med. Record.*

Dr. Ogle thinks it may be found that in tetanus the temperature always increases in the evening, and that a guide may thus be given for diagnosticating true tetanus from certain affections of the spinal cord and its membranes, certain cases of hysteria, and poisoning by strychnia or other substances. —*Medical Gazette.*

Medical Miscellany.

CHARLESTOWN SOCIETY FOR MEDICAL IMPROVEMENT.—A large number of the physicians of Charlestown met Dec. 13th and organized a new society, to be known as the Charlestown Society for Medical Improvement. A constitution, drawn up after the plan of the one adopted by the Medical Improvement Society of Boston, was adopted. Drs. McDonald, Dearborn, Herrick and Crozier were elected a prudential committee, and Dr. E. J. Forster was chosen Secretary. The future meetings of the Society will be held on the second and fourth Tuesdays of each month.

IN the *Neues Repertorium für Pharmacie*, Bd. xix. Heft 5, Emil Werner shows conclusively that *Ricinin*, the alkaloid discovered by Tuson in the castor-oil bean, is no alkaloid, but a double salt of magnesia and potash, with some organic acid, probably one peculiar to the bean.

In the same work, MM. Lucian de Koninck and Paul Marquart state that they have found a new nitrogenous neutral substance, bryonicin, in the roots of Bryonia alba. It is insoluble in cold water, solutions of lime or ammonia, and dilute mineral acids. Boiling water and strong muriatic acid dissolve it slightly; whilst alcohol, ether, chloroform, and benzole dissolve it readily. With strong sulphuric acid it rapidly produces a solution of a blood-red color.—*Phil. Med. Times.*

CLIMATE OF ALGERIA.—Dr. Henry Bennett says that Algeria comprehends a country of 400 miles long from east to west, and some 120 miles from north to south, where Sahara commences. None of the mountains are more than 7,000 feet high. There seems to be only thirty days of wind blowing from the desert annually; during the rest of the days of the year a moist sea-breeze blows. Six-sevenths of the rain falls in the winter season, and as much as forty cubic inches fall in the year. Thus Algeria is a very moist climate in winter. The valleys and mountains have a luxuriant vegetation. The climate is rigorous in winter in many parts, but Algiers town seems of mild climate. Algeria is thus, on the whole, a mild and moist climate, not suitable for patients with tendency to phthisis pulmonalis. The east coast of Spain is dry and warm; only fourteen inches of rain-fall in that district, and it is better suited for such invalids. Idiopathic asthma and neuralgic cases, he thinks, might be benefited by living in Algeria. —*Dublin Medical Press and Circular.*

THE subjoined episode of volunteer surgery we extract from a daily paper:—

EVERY MAN HIS WIFE'S SURGEON.—The Lee (Mass.) *Gleaner* gives currency to a rumor that a man in Otis, whose wife had long suffered with a running sore upon her leg, became tired of listening to her griefs and caring for her diseased member, and so he bound the woman upon a bench, and with a butcher knife and handsaw cut her leg off. Of course he knew nothing of taking up bleeding arteries, and death soon came to the relief of the sufferer. He then took the body in a wagon to Lee for burial. Arriving at the cemetery late at night, he laid it upon the ground, covered it up, and left it till the next day for burial.—*N. Y. Medical Gazette.*

DEATH BY CHLOROFORM PREVENTED BY ELECTRICITY.—On the 22d of November, 1866, Dr. Danzel administered chloroform for the removal of a cancer. After the operation the patient ceased to breathe, and opening the windows, artificial respiration and all other agencies proved of no avail, when recourse was had to electricity. One pole of the battery was applied to the neck, the other to the epigastrium. There was soon a movement of the muscles, and by degrees the respiration was restored. There is no doubt that death would have ensued without the application of electricity, and as this remedy has been applied with success in several other cases, it is worthy of note on the part of physicians generally.—*Journal of Applied Chemistry.*

TO CORRESPONDENTS.—Communications accepted:—Report of Passavant's Operation, with and without Ether, and also under Nitrous Oxide.—Three Cases of Surgery.—A Case of Eclampsia, before and after Labor; Notes from an Obstetrical Case Book.—Bleeding in Puerperal Convulsions.

PAMPHLETS RECEIVED.—Histological Contribution. By H. G. Piffard, M.D., Surgeon to the New York Dispensary for Diseases of the Skin. Pp. 4.—An Essay on the Treatment of Aneurism, with Experiments for the Closure of Arteries by a New Method. By Benjamin Howard, A.M., M.D., of New York. Extracted from the Transactions of the American Medical Association.

*Deaths in sixteen Cities and Towns of **Massachusetts** for the week ending Dec. 17, 1870.*

Cities and towns.	Total.	Prevalent Diseases. Consumption.	Pneumonia.	Croup and Diphtheria.
Boston	102	23	6	3
Charlestown	14	4	2	0
Worcester	15	4	2	1
Lowell	15	3	1	3
Milford	3	0	1	0
Chelsea	7	3	1	0
Cambridge	9	5	2	0
Salem	6	0	0	1
Lawrence	6	2	0	2
Lynn	6	2	0	0
Fitchburg	2	0	1	0
Newburyport	5	1	1	1
Somerville	7	0	1	0
Fall River	9	1	1	2
Haverhill	2	0	0	0
Holyoke	10	0	1	1
	228	48	20	14

Holyoke reports seven deaths from smallpox.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending Saturday. Dec. 17th, 102. Males, 49; females, 53. Accident, 1—apoplexy, 3—inflammation of the bowels, 1—disease of the brain, 3—bronchitis, 7—consumption, 23—convulsions, 1—croup, 4—debility, 8—diarrhœa, 5—dropsy, 1—dropsy of brain, 2—scarlet fever, 2—typhoid fever, 4—gastro-stenosis, 1—disease of heart, 4—"indigestion," 1—disease of the kidneys, 2—disease of the liver, 1—congestion of the lungs, 2—inflammation of the lungs, 4—marasmus, 3—old age, 5—paralysis, 1—pleurisy, 1—premature birth, 2—peritonitis, 1—puerperal disease, 3—unknown, 5.

Under 5 years of age, 33—between 5 and 20 years, 7—between 20 and 40 years, 26—between 40 and 60 years, 15—above 60 years, 21. Born in the United States, 66—Ireland, 25—other places, 11.

THE

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Original Communications.

CASE OF FOREIGN BODY IN THE AIR-PASSAGES.

By O. W. Doe, M.D., Boston. Read before the Boston Society for Medical Observation, Nov. 21, 1870.

Ella F., twenty-eight months old, a short, stout, fleshy child, on the 13th of August last, was sitting on the round of an old-fashioned wash-bench, according to the report of a playmate, holding tightly the head of a shawl-pin between her teeth and snapping the point of the same with her finger. On changing her position, to sit upon the top of the bench, she fell backwards, striking with considerable force upon the back of her head. Her mother, alarmed by the cries of her companion, immediately proceeded to the scene and found her lying in the arms of a young girl, rigid, face deeply congested, violently coughing and gagging, and constantly moving her head from side to side and carrying her hands to her neck. She once attempted to pass her finger down her throat. The mother examined her throat, but saw nothing indicative of the trouble. A physician was immediately summoned, and found the child lying on a sofa, pale and exhausted, with a short, hacking cough. He stated to the parents that the pin had probably passed into the stomach, and advised that the patient be kept as quiet as possible, and to await future developments. At this time the mother noticed that the least motion of the child's head would excite coughing.

The accident happened at about 4 o'clock in the afternoon, and at half-past 5, the distressing symptoms having subsided, the patient ate heartily of thick tripe and mashed potatoes, having taken nothing previously since morning, excepting bread and milk. She presented no apparent difficulty in swallowing, but was noticed to drink very often of water and to cough after each act of deglutition.

Just previously to finishing her meal, she was seized with a violent fit of coughing, and presented the same symptoms as have been described as taking place at the time the accident occurred. The paroxysm continued for nearly ten minutes, and was terminated by expectorating about a drachm of bright arterial blood. No food was vomited. The patient immediately fell into so heavy a sleep that moving her from one room to another did not awaken her. At this time her breathing was so quiet and slow that she was thought to be dying. During the night she rested well, and on the following day seemed as well as usual, excepting that her countenance had a pale bluish tinge. She ate heartily of brown bread and beans, played about the house, and in the afternoon went down the street to meet her father. Towards evening she became dull and listless, fever supervened, and she soon fell asleep. During the evening her breathing became loud and stridulous; skin extremely hot, and the subsequent symptoms, as described by her mother, were those of laryngismus stridulus, which abated towards morning, but did not wholly disappear till the middle of the next day. At that time a surgeon was consulted, but no special treatment was advised. That afternoon the patient again became very feverish, and thus continued for twenty-four hours, when vomiting supervened and lasted until midnight, everything being rejected as soon as taken. The fever subsided on the accession of the vomiting.

On the morning of the fifth day she seemed perfectly well, ate heartily and played out of doors. In the forenoon, she had a paroxysm of coughing, more severe than any that had preceded, after which she fell into a deep sleep, apparently perfectly exhausted. During sleep her mother noticed a "drawing up," as she expressed it, of the space beneath the left clavicle, perceptible on the application of the hand, and also a whistling sound apparently arising from the same region, and heard distinctly when the ear was considerably removed from the chest. In the afternoon, the surgeon previously referred to was again called in consultation, and made a thorough examination of the chest. He informs me that nothing definite was discovered; no evidence, as far as he could determine, of either local or general disease.

On the sixth and seventh days after the accident she seemed perfectly well, and played out of doors the greater part of the time, but suffered from a frequent hoarse cough at night.

On the ninth day, another severe paroxysm supervened, followed, as previously, by a heavy sleep; and, on awaking, she was unable to utter the faintest sound. This aphonia continued for half an hour, and during this time there was considerable dyspnœa. Paroxysms of coughing, followed by high fever and sleep, were noticed to occur about every second day, from the effects of which the patient was gradually losing flesh, and very frequently there were noticed dark-blue circles about her mouth and eyes. Attacks of dyspnœa now occurred nearly every night, and a short cough, occasionally noticed during the preceding three or four days, had gradually increased in frequency. Notwithstanding these symptoms, the child continued about her play as usual.

I saw the patient for the first time twelve days after the accident occurred. At that time she seemed bright and playful, and to one unacquainted with the previous history no suspicion of disease would have suggested itself. Her appetite and general condition seemed unimpaired. The only rational symptom noticeable was the short, loose cough above mentioned. On making a physical examination of the chest, loud, sonorous and mucous râles were distinctly heard, even before the ear was brought in contact with the skin, throughout the whole front and back of both lungs. Nothing in the physical signs would suggest, and much less locate, a foreign body either in the bronchi or pulmonary substance. I ordered a simple stimulant expectorant, and advised that nothing further should be done until the bronchitis had somewhat subsided, as the patient was comparatively easy and there being no indication of immediate danger.

Three days later, I visited her again and found her sleeping, after a hearty play. Soon awaking, I made a second examination of the chest, but found the condition of the lungs the same as on the previous examination.

On the nineteenth day of her sickness I was summoned in great haste, and found the child in convulsions. From the mother I obtained the following history. There had been no development of new symptoms or any change in her condition from the time I last saw her, until about two o'clock that day. At that time, while playing with her rocking-horse, she suddenly choked, as she was calling to a playmate, and in a moment became perfectly rigid. When her mother reached her she was in convulsions, her face deeply livid, and, from her mother's description, there was marked opisthotonos. Convulsions occurred about every ten minutes from two until about half-past six. When I saw her, at half-past five, she was lying on her back, perfectly unconscious, pupils widely dilated, frothing at the mouth, and generally convulsed; convulsions were of a clonic character, and much more noticeable on the right side than on the left. In the interval between the convulsions there was no return of consciousness. I gave her, as soon as it could be procured, two grains of the yellow sulphate of mercury. This was taken about six, P.M., and produced free emesis. Consciousness soon returned, and at eight, P.M., the patient was able to speak. During the night she slept quietly, and on the following day the only marked symptom was exhaustion. After this the paroxysms of coughing occurred frequently during the day, and were noticed to take place whenever the child inclined her head far forward.

On the afternoon of the twenty-first day of the disease, the patient suddenly became quite hoarse, and soon after complete aphonia ensued, which continued for four hours. When the voice returned, it was of a distinct croupy character, and the patient was noticed to shrink on accidentally touching the cervical region. The following morning the respiration had become labored, and the voice greatly muffled and indistinct; mucous and sonorous râles were heard abundantly over the whole front and back of the chest. The treatment consisted in warm applications externally to the throat, in administering an emetic of turpeth mineral whenever necessity demanded, and in keeping the air of the room constantly moist with steam containing the vapor of slacked lime. Inhalations of lactic acid were advised, but were not satisfactorily given. The patient refused all nourishment, and any attempt to force it was succeeded by such violent coughing and strangling as to excite fear in regard to the immediate result, and they were consequently desisted from. The symptoms continued to increase in severity, so that on the fourth day after the attack her pulse had become extremely weak and irregular, respiration painfully labored, and the voice scarcely perceptible. All efforts to give nourishment by enemata were also relinquished, for the same reasons as stated above. At this time the patient coughed up a piece of membrane, which the mother reported as nearly four inches in length. From this period the symptoms appertaining to the throat steadily improved.

The next morning, although the voice and labored respiration had greatly improved, I found the patient in a very high fever and with a rapid pulse. On examination of the chest, I found distinct bronchial respiration throughout the upper third of the right lung; elsewhere were heard the loud mucous and sonorous râles reported at the first examination. She passed through a regular course of pneumonia, and, on the sixth day of the disease, to all appearances was dying; the pulse was extremely feeble, extremities cold and livid, countenance pale and pinched. At the request of friends, Dr. Aiken saw the patient with me, but advised nothing, as he considered her *in articulo mortis*. Up to this time the patient had taken no form of nourishment for ten days.

On visiting the house the next morning, instead of finding my patient dead, as I expected, she was sitting up in the cradle playing with her dolls, and to all appearances as bright as when I was first called to her, excepting her pallor of countenance. She had partaken freely of milk just previously to my arrival. On examining her chest, to my great surprise nothing abnormal was heard, excepting sub-crepitant râles where previously existed the bronchial respiration.

The following day respiration was less easy, and there was evidence of returning mucous and sonorous râles. Late in the afternoon, I called in Drs. Aiken and Cheever, to consult with reference to an operation for the extraction of the pin, and it was decided that an attempt should be made. As there was no immediate danger it was proposed to wait until the following afternoon, unless necessity demanded an earlier interference. Accordingly, on the following day, thirty-three days after the accident occurred, at 4, P.M., the patient was etherized and the operation performed by Dr. Cheever. An incision, extending from immediately below the cricoid cartilage to the upper border of the sternum, was made through the skin and superficial fascia, and the sterno-hyoid and sterno-thyroid muscles separated, avoiding the thyroid plexus of veins. Not more than half a drachm of blood was lost in reaching the trachea, which being freed for a short space from the surrounding tissues and firmly held, an incision was made sufficiently large to admit the forefinger; this was succeeded by frequent attacks of coughing, attended with an ejection of a quantity of mucus. Explorations were made with long, narrow, curved forceps and probe, extending into the larger bronchi. The finger was also passed up to the epiglottis, but nothing was discovered. About ten minutes after the trachea was opened, and after a very thorough exploration was made, the patient gave a forcible cough, and the point of the pin was seen to strike the internal wall of the trachea at the edge of the incision, and was immediately seized by the forceps and extracted. The pin was a medium-size shawl-pin, an inch and a half long, with a glass head. The patient recovered shortly from the ether, and seemed to take a lively interest in what was passing around her. Cold-water dressing was constantly applied to the wound, the air of the room kept moist and the temperature at 78° Fah. The patient slept well during the night, except when disturbed by coughing, at which time a free discharge of stringy mucus would take place through the wound. From this time the patient partook freely of liquid food.

Four days after the operation the trachea had closed over, so that no air passed through the artificial opening, and on the tenth day the external wound had entirely cicatrized. The patient made a speedy and perfect recovery, with no untoward symptom, except a slight attack of catarrhal croup on the sixth night.

In searching carefully the American and English medical journals, I have been able to find only four cases where tracheotomy has been performed for the removal of either a pin or needle, but a great number for the removal of other foreign bodies of a diversified character.

Dr. W. H. Van Buren, of New York, reports a case operated on by Prof. Mott, where a child, nine months old, was suddenly seized with fits of coughing and strangling, while in the nurse's arms, without any assignable cause. Paroxysms of suffering continued undiminished, with occasional intervals of comparative ease, until the third night, when, suffocation threatening, tracheotomy was performed, and a shawl-pin, two inches in length, was found fixed opposite the wound, with the glass head directed downwards. The child made a rapid and perfect recovery.

In the American Journal of Medical Sciences, Vol. iv., there is a case reported where a needle accidentally slipped into the nose of a man, 21 years of age, from which it passed into the pharynx, and, finally, into the lung. At the end of the fifth day, laryngotomy was performed, and an attempt made to remove the foreign body by forceps, but so much irritation was induced as to cause the operator to desist. The wound was covered with a perforated compress spread with cerate. The next morning, the pin, an inch and a half in length, was found in the dressing. The symptoms in this case were remarkable hoarseness, dysphagia, frequent cough, and almost entire aphonia. The patient recovered, but his voice remained hoarse and feeble for several months.

In the same journal, for 1869, Dr. J. C. Reeve, of Dayton, Ohio, reports the case of a girl, 8 years of age, to whom he was called in the night, who stated that she had swallowed a shawl-pin. Inspection of chest showed that the left side did not expand on inspiration, and that the respiratory murmur was entirely absent on that side. As the symptoms were not urgent, the operation was postponed until the following day. At the time of the operation, a great quantity of blood was lost, and her condition became so critical that the pin was forcibly withdrawn by bending it out of the incision. In this case a tube was worn for forty-eight hours lest the swelling from the injury to the parts might interfere with respiration. The pin measured three and three-fourths inches in length. The patient made a perfect recovery.

In the Boston Medical and Surgical Journal for 1861, Dr. G. W. Chittenden, of Janesville, Wis., reports a case where a pin passed into the trachea of a young lady, and lodged between the thyroid and cricoid cartilages in a transverse position. Tracheotomy was performed, and the forceps applied to the pin, but in the effort to extract it the instrument lost its hold, and the pin was ejected with the mucus, which was forced out through the artificial opening during the severe coughing which followed. The patient made a rapid recovery.

These five cases, which I have reported, all recovered; but, unfortunately, this success does not attend all cases of tracheotomy for the removal of foreign bodies.

Dr. Gross, in his work on Foreign Bodies, which contains a tabulated report of all cases recorded up to the year 1853, and in which the offending substances were exceedingly diversified in their size, shape, and composition, gives forty-eight cases where spontaneous expulsion took place without an operation, followed by recovery; and eight in which death resulted, two being from exhaustion, and six from pulmonary disease. A piece of bone was retained sixty years, and then expelled by coughing.

In seventeen cases of laryngotomy, thirteen recovered, although in four of these the foreign body was not expelled for some days after the operation, and four died, one from exhaustion and three from non-removal of the offending substance.

In sixty-eight cases of tracheotomy, only eight deaths are reported, and in only forty-one of those that recovered did the expulsion of the foreign body take place immediately: the time of the others varied from one to forty-seven days, and in only nineteen was the body removed by instruments at the time of the operation. In five of the eight deaths which resulted, the foreign body was not expelled; of the three in which it was removed, one death occurred from pulmonary disease eight months after, one from entrance of blood into the trachea, and the cause of the third was not stated.

In thirteen cases of laryngo-tracheotomy, ten recovered, and three died. In only four of those that recovered was the foreign body expelled at the time of the operation; the time intervening between the operation and the expulsion of the others varied from one to three days. In only half of the cases was the substance removed by instruments.

Of the three deaths, two resulted from the retention of the foreign substance, and the other, on the fifteenth day, from bronchial obstruction.

In the preceding statistics given by Dr. Gross, the percentage of deaths without operation is $16\frac{2}{3}$: after operation, $18\frac{1}{4}$. The apparent discrepancy here arises from the fact that only the severer cases came to an operation.

In all cases of tracheotomy for the removal of foreign bodies, the success of the operation does not depend so much on the immediate removal of the substance with the aid of instruments, as in forming an artificial opening, through which the foreign body may be expelled by the voluntary efforts of the patient.

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Opium Eating.—In a late number of the Philadelphia *Medical and Surgical Reporter*, Dr. Scheitzer, of Baltimore, relates the case of a lady, 28 years of age, who had consumed in two years 5840 ounces of laudanum.—*Cincinnati Medical Reporter.*

DEFECTS OF OCULAR REFRACTION, &c.

(Concluded from page 412.)

Lecture V.—*Myopia.*

Myopia may be defined as that state of refraction in which the far-point is at a finite distance in front of the eye. Such an eye does not see distinctly beyond a certain distance, while it may have perfect vision for nearer objects. In the absence of accommodation rays emanating from the far-point come to a focus on the retina; rays emanating from a nearer point may, with the help of the accommodation, also come to a focus on the retina. But rays emanating from a point more distant than the far-point, as, for instance, parallel rays, come to a focus in front of the retina. If we consider that the object of the refraction is to bring the focus to the retina, it may be said that in the myopic eye the refraction is too strong relatively to this object; is stronger than in the emmetropic eye. Here we see another property of the myopic eye, viz.: that the distance of the retina behind the cornea is greater than the distance of the second principal focus from the cornea. If this latter were the same as in the emmetropic eye, then the myopic would be longer than the emmetropic. And in fact it is found that anatomically the myopic eye is often, if not generally, longer antero-posteriorly than the emmetropic. This enlargement, in view of its causes and consequences, is quite as important as regards the appreciation and treatment of myopia as the characteristic optical condition is.

The amount of accommodation as measured by Donders's formula is about the same in myopia as in emmetropia, but the region is quite different and smaller. Suppose the accommodation equal to $\frac{1}{8}$. Then in emmetropia the region would extend from very distant objects to those only 8 inches from the eye; while with the same amount of accommodation in myopia $\frac{1}{8}$, the region would extend only from objects 8 inches off to those 4 inches off.

We saw, when considering presbyopia, that myopics need convex glasses to correct their presbyopia, if at all, not so early in life as emmetropics, as they are already provided with a relative excess of refractive power. "Up to the sixtieth or even the seventieth year of our age, not to need spectacles, in order to see accurately whatever comes immediately under our eye, is a great privilege. This privilege belongs to myopia of from $\frac{1}{10}$ to $\frac{1}{14}$, in which degree the eye is not threatened with any special dangers."*

With regard to the diagnosis of myopia the methods by the ophthalmoscope have been previously described. We may also recognize it by testing the patient's vision. If an eye can distinguish No. I. of Snellen's letters at one foot, but cannot read No. XX., which is twenty times as large, at twenty feet (supposing no accommodation active), it is myopic. The retinal pictures in the two cases, if distinctly formed, would be very nearly of the same size. The ability to read in the one case and not in the other would indicate a defect in the range of optical adjustment, and in the case supposed, *myopia.*

Again, suppose no accommodation active, and the media to be clear. Then if vision for distant objects is improved by a concave glass, and if the vision is brought up to the normal amount, then we have myopia; if improved, but if it cannot be brought up to the normal amount, then some myopia, but also some other trouble, as disease of the fundus oculi or astigmatism. The effect of strong concaves to diminish the size of the retinal images must be remembered.

If the media are not clear a concave may improve distant vision, even though no myopia; because such a glass requires accommodation, which is accompanied by diminution of the pupil and this latter may improve the vision in the case supposed.

Also, we must not be content with the statement of the patient that he sees better; he must prove it by reading smaller letters.

In testing for myopia we should bear in mind that it may be complicated with astigmatism; this latter, if present, should be recognized and corrected, as if uncorrected, it has been thought to increase the myopia.

Myopia should be distinguished from conical cornea, or irregularly projecting cornea, which presents symptoms of myopia combined with amblyopia. The irregular prominence with often a slight opacity at its summit can generally be seen on careful inspection.

Cataract in children sometimes simulates myopia, and might occur in connection with it. The cataract is easily recognized by oblique focal illumination, or with the ophthalmoscope.

Mere opacity or cloudiness of the cornea must not be mistaken for myopia.

The measure of the amount of myopia

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* Donders. On the Anomalies of Accommodation, &c. P. 213.

depends conventionally on the distance in inches of the far-point from the eye. If this distance is 12 inches, the myopia is $\frac{1}{12}$; if the distance is 4 inches, the myopia is $\frac{1}{4}$; the amount is greater as the far-point is less distant.

The amount of myopia may be determined for each eye separately by the weakest concave glass which under atropine gives the best vision of distant objects. An indication of this glass is given by the far-point for reading ordinary print, or, if the myopia is slight, larger print. If atropine is not used, as is often the case, we must be very careful not to estimate the myopia too high.

The amount of myopia may also be determined by the ophthalmoscope, being indicated by the weakest concave which allows a distinct view of the upright image.

As to the cause of myopia, while it might possibly depend on differences in the form of the surfaces bounding and separating the refractive media of the eye, and upon differences of the densities of these media, it is now believed to depend in fact generally on the increased length of the eye antero-posteriorly, this having been frequently demonstrated in cases of the anomaly.

This defective oval shape or diseased enlargement is very frequently accompanied by marked pathological changes in the interior parts of the eye, and in the sclerotic, such as atrophy of the choroid, thinning of the sclerotic and others. These changes have by some been attributed to an inflammatory disease called sclerotico-choroiditis posterior, which has been looked upon as the chief cause of the distention and prominence of the posterior part of the eyeball, or of the *posterior staphyloma.*

On the other hand the disease, sclerotico-choroiditis posterior, may be looked upon rather as the result of the increasing distention of the choroid and sclerotic, this distention being due primarily to a congenital weakness of the tissues, and subsequently in part to over-use of the accommodation, and in part to the excessive convergence required in myopia and to mechanical difficulties connected with the movement of the oval eye-ball. A defective elongation of the eye may even be congenital.

These two views do not exclude each other. The distention of the membranes may give rise to irritation and inflammation, and these latter may in their turn promote the distention. Myopia is very often hereditary, and sometimes congenital.

One of the intra-ocular changes referred to, and one which is almost invariably seen with the ophthalmoscope in high degrees of myopia, is an appearance by the side of the nerve-disk of a somewhat crescent-shaped, light-colored spot, where the choroid is atrophied and allows the lighter color of the sclerotic to show itself through. This spot may be explained as depending on choroidal atrophy caused by the distention of the choroid and sclerotic, or as due to a congenital want of development. The middle of the crescent does not always correspond with the apex of the staphyloma. This crescent, though generally accompanying the higher degrees of myopia, would not of itself prove the presence of the anomaly, for a similar appearance is sometimes found without myopia.

As to the relation of the crescent to the other similar changes in the fundus, some authorities consider the latter as an extension of the crescent; but by others a distinction between them is made, inasmuch as the crescent is not always accompanied by inflammation; sclerotico-choroiditis being then understood to involve changes in the fundus more extensive than the crescent, besides changes in the vitreous and consecutively in other parts. They occur, however, often together, and eyes with the atrophic crescents are by some observers considered more liable to the other changes.

If myopia is to be developed at all, it generally shows itself in youth, and is liable to increase subsequently. This increase may in favorable cases be comparatively little, or the anomaly may, though very rarely, decrease a little late in life. Such cases occur for the most part among the low degrees. They have given rise to the expression *stationary myopia* as distinguished from the more progressive forms.

Sometimes the disease, after temporarily progressing, as for instance till about the thirtieth year, may then become stationary.

In the higher degrees the increasing distention of the posterior membranes causes the myopia to increase more and more, till finally the eye may lose all useful sight. Besides the optical difficulty from the far-point approaching so close to the eye that it is not able to see distinctly at a greater distance than two or three inches, the retina, also, in consequence of the distention of the membranes, becomes seriously affected both at the macula lutea and elsewhere. Extravasations of blood from choroidal vessels may occur just beneath the macula lutea. The retina may be extensively separated from the choroid by serous effusion, or choroidal hæmorrhage. Glaucoma may supervene; other lesions less serious may occur, such as opacities in the vitreous and cataract. The lesions mentioned, however, are not peculiar to myopia.

The difficulty of convergence of the myopic eye, owing to its oval shape, taken in connection with the circumstance that unless glasses are used, a greater convergence is often required, may give rise to fatigue and insufficiency of the internal recti muscles, which may result in divergent strabismus. The divergence may perhaps be sometimes promoted by a relaxation of the efforts to converge in order to avoid the accompanying increase of accommodation.

Graefe has taught that where insufficiency of the internal recti is present, the myopia is especially liable to increase, owing to the pressure and congestions accompanying the increased efforts to converge; and advises under certain circumstances the tenotomy of one or both external recti with a view to facilitate the convergence and thereby guard against the increase of the myopia.

In the higher degrees of myopia, when the serious complications mentioned have set in, the course of the disease can hardly be checked. It is, therefore, of the utmost importance to look at its first beginnings, and in this regard observation shows that a principal cause of myopia is the prolonged use of the eyes on too near objects in childhood and youth. Such use of the eyes involves excessive exercise of the accommodation and of the convergence, with the accompanying vascular congestion and increase of internal pressure; and from these results a yielding of the tissues, naturally less resisting in childhood, even if no hereditary predisposition to such yielding exists. A bending forward of the head promotes congestion of the eyes and so increases the internal pressure.

Whatever leads to such imprudent use of the eyes, especially in childhood, is to be looked upon as a cause of myopia and avoided; for instance, insufficient light, inconvenient seats and desks which may induce the bending forward of the head, overtasking of the children—against which of course there are other reasons more important than the danger of myopia—fine print, especially as often found in dictionaries and on maps.

The complication of astigmatism, by calling into play the accommodation in vain attempts to neutralize it, and owing to the diminution of vision causing the book or work to be brought nearer the eye, has been thought to favor the increase of myopia.

As to glasses: a concave $\frac{1}{12}$, neglecting the distance between the glass and the eye, will adapt a myope of $\frac{1}{12}$ for parallel rays, or for distant objects. In using such a glass *for distant objects* there seems to be no danger, if we have correctly estimated the myopia—that is, not too high.

But may the same glass be used for reading, sewing, &c.? This would require the action of the accommodation; but also, even without the glasses, such a myope will often accommodate and read at a less distance than 12 inches, and thus incur the danger of too much convergence. So that, on the one hand, if he uses the glasses $(-\frac{1}{12})$ for reading, he must accommodate. This in a healthy eye is perfectly natural. But in a diseased eye, as the myopic often is, it has been thought that the action of the accommodation, considered as involving increased intra-ocular circulation and pressure, may be injurious. On the other hand, without the glasses, there is danger of too much convergence. In either case a certain amount of injury is to be feared.

A comparatively safe mean course is to give for distant objects glasses which do not quite correct the apparent myopia (as there may have been some action of the accommodation causing the myopia to be overestimated); and for reading or sewing, weaker glasses, sufficient to remove the far-point to about 18 inches, supposing of course the myopia so great that without glasses the danger of too much convergence is incurred.

In considering more nearly the use of concave glasses, we may distinguish, as regards comparatively young persons, between the cases where the same glass which corrects for distant objects can also be worn for near objects, and those in which this cannot be done. In advanced life, after the range of accommodation has become small, the same glass will not suit for very different distances.—We must also notice the case of a very slight degree of myopia, and that of a very high degree with diminished acuteness of vision. We must bear in mind that strong concaves diminish the size of the retinal images; and that the question presenting itself is not merely what concave will carry off the far-point to the desired distance, but also, among others, whether, considering the diminished size of the retinal images, the eye has sufficient visual acuteness to see clearly through the required glass the object at the desired distance. The possibility of the eyes not being able to maintain easily the desired convergence must also be remembered. For the recognition and treatment of the latter condition we must here refer to the very elaborate and minute teachings of Graefe on insufficiency of the internal recti.

The following more detailed directions as to the selection of glasses are taken from Donders.

"When the myopia is slight, in reference to the range of accommodation, and the eye is otherwise healthy," the glass which corrects the myopia for distant objects may also be worn for near objects. "Glasses of $-\frac{1}{15}$ adopted at 17 years of age are often still sufficient at 45, both for seeing acutely at distance and for ordinary close work." "The myopia thus neutralized is less progressive, because both too strong convergence and a stooping position are avoided. But if the tendency to these is so great that they still occur in neutralized myopia, the use of glasses is dangerous, and must be discontinued so soon as it appears that the myopia is particularly progressive. In this case it is necessary for a time to forbid all close work."

"In order to obtain all the advantages of concave glasses the myope must begin early with them."

"If neutralizing glasses, or nearly such, have not been worn from youth, the relative accommodation becomes such that in moderate degrees of myopia, for example of $\frac{1}{10}$, we can no longer completely neutralize at 35 years of age. We should then confine ourselves to glasses which bring *r* (the far-point) to about 24 inches, giving, if necessary, still weaker ones for working."

If neutralizing glasses cannot be used, that is, if glasses corresponding to the degree of myopia cannot be worn both for distant objects and for reading, we must give glasses for particular distances; bringing the far-point to the distance or a little beyond the distance of the objects.

"In very slight degrees, from $\frac{1}{60}$ to $\frac{1}{18}$, we may leave the myope to himself;"

"In the highest degrees, from $\frac{1}{5}$ upwards, perfect neutralization is not pleasant for close work, because, with regard to the usual diminution of the acuteness of vision, the images become too small. We should then rather bring *r* (the far-point) to 12 or 16 inches."

If inflammatory complications supervene, attended with irritability, pain, subjective appearances of light, apparent increase of myopia and diminished vision, it will be necessary to lay aside the glasses, rest the eyes, and shade them from the light; to avoid stimulants and fatigue; to look after any defect of the system; sometimes it is useful to apply the artificial leech to the temples, followed by a stay in the dark for 24 hours, with application of atropine to the conjunctiva, and a gradual return to the light. In the complication of glaucoma, Graefe has advised iridectomy.

OUR BLUNDERS AS STUDENTS.

By L. F. C. Garvin, M.D., Lonsdale, R. I.

Among the three or four hundred students of medicine now assembled at Harvard, there is a class to whom I wish to say a few words—to give "advice without medicine." I refer to those who, aside from two winter courses at Harvard, are to pass their pupilage in the offices of country practitioners, and who are now entering upon their first lectures with the desire of realizing from them the greatest benefit possible. This comparatively small number is singled out from the rest, because a few years ago I was in their position, and because I then committed or observed many mistakes which a timely word of warning might have prevented. Experience may be the best schoolmaster, but he who profits by the experience of *others* is the best scholar.

While it is too late to recommend to you a scheme of preparatory study, yet I certainly consider him fortunate who is already well grounded in the text books of anatomy and physiology. The error almost universal on the part of those who really mean work is an attempt to do too much in the short space of four months. A conscientious young man having paid for lectures in every department, as a necessity for graduation, is urged by motives of economy to attend all within his power. In those rare instances in which an iron constitution enables its possessor to keep well while listening to six or eight lectures daily, besides attending the other exercises of the school, an effect is produced equally as bad as bodily sickness. The student acquires a superficial knowledge of many if not all of the subjects treated. Impressions continuously repeated, without proper intervals during which they may become stereotyped, will afterwards be found indistinct and unreliable. The winter will fail of its anticipated fruits, because of the very eagerness with which they are gathered.

To be explicit, the first course of lectures should not include obstetrics, theory and practice, skin diseases, mental hygiene, perhaps not even surgery. But in anatomy, materia medica, chemistry and morbid anatomy, not a lecture should be omitted.

Now does any one think this is omitting too much, and dessert at that, from the generous bill of fare? Let us see. Anatomy, even if well studied beforehand, is not yet mastered—it cannot be away from the dissecting-room. The first, the second, and every course should have its full share of practical anatomy. A first-rate anatomist never makes a third-rate doctor. A proficient dissector is half way to being an accomplished surgeon. Indeed, every branch of the profession is dependent upon anatomy. The human body is to the physician as well as surgeon what the earth is to the geologist, or the firmament to the astronomer. If the foundation is rotten it is vain to hope to rear a satisfactory superstructure. For the student to gain a strong foundation, it is necessary for him to join the *quiz*, as a preparation for which some study is needed in addition to the teachings of the lecture-room. Thus a single primary subject claims about one-fourth of the whole winter's work.

Chemistry, to be of much value, must be accompanied by reference to the text book outside of lecture hours. Ignorance of practical chemistry is the great defect in country educated physicians, but the present is not the time to supply it. No student can consider himself educated in medicine until he has spent at least one term in a chemical laboratory. Such an opportunity is the greatest attraction of the summer school.

Materia medica must be added to the second, as well as the first winter's course, and the third, when taken, and full notes in this department must be preserved. My note book upon Dr. Clarke's lectures has no substitute in any or all the works upon materia medica and therapeutics, or upon theory and practice. With regard to taking notes no universal rule can be adopted. There is such a thing as attempting to keep too full a record. But no lecture, or exercise, should surprise you without means of jotting down upon the spot the crystallized experience of Harvard's excellent instructors. To the chair of morbid anatomy this remark is especially applicable.

Beside the lectures proper, there are privileges peculiar to cities, schools and hospitals, of which you must especially avail yourselves.

The theory and practice of medicine and surgery, if not listened to in the lecture-room, may be studied at the bedside. Just as in learning a foreign language, there is no way of approaching medical science so pleasantly or naturally as on the practical side. Close observation of cases, of the mechanical treatment of fractures, of the dressing of wounds, of surgical operations, and finally exercise in auscultation and percussion, will prevent neglect of the more advanced branches. A word about how to do this in the best way. For the first few weeks of the lecture term there is a grand rush for the hospital wards, and each visit is crowded. If a student gets near one bed in three he is fortunate, if not selfish, but he soon finds that peeping at a patient ten feet distant between the heads and over the shoulders of others is not likely to give an intimate acquaintance with the case or the disease. With the approach of the winter solstice the numbers attending the morning visit at the hospital fall off. When the novelty is gone, and the first enthusiasm is cooled by hard work, many students at 8, A.M., find their own beds more attractive than those in the sick wards. The student will lose little, therefore, by neglecting the hospitals for the first month. Wait until sitting at lectures, the careful use of text books, and preparation for the quiz has by habit become easy. Then a visit to the wards will not only have novelty, but will be full of interest and instruction. Do not fear the long journey to the distant hospitals and dispensaries, even on rainy and snowy days. It is the best time to examine patients in the wards. A few cases well followed, their condition, from week to week, carefully watched and compared, are of more value than hundreds glanced at once. There are two classes of patients to which particular attention should be directed. One comprises diseases in which comparison is of great importance, such as affections of the eye and skin—subjects difficult of mastery in a country practice. The other class referred to are the cases soon expected to result fatally, including those of tumors, phthisis, &c. This implies that autopsies are to be attended. Keep advised as to their occurrence, especially if they happen at odd hours, when there will be plenty of time. It would be an unpardonable oversight to omit mention, in this connection, of the *clinical conference*. It is popular, and deservedly so. In no other way can the same amount of information be acquired by the student in an hour's time.

It would be useless to tell any of you not to go to operations, if experience *had* proved such a course best; but it must be borne in mind that this exercise is subject to the same universal law as the others. A few operations, thoroughly understood, are better than many only seen.

In conclusion, let me repeat the warning with which I began. Do not try to do so much in the first half of the course that the second half shall find you drained of energy and vitality. Go up hill instead of down.

RADICAL CURE OF ARTIFICIAL ANUS.

Translated from the Gazette Hebdomadaire, by F. W. DRAPER, M.D., Boston.

M. GOYARD recommends a new method of operation for the radical cure of artificial anus. "The real indication to be fulfilled," he says, "is to prevent the escape of the intestinal contents between the lips of the opening." For this purpose a suture is passed near the margin of the orifice, so that it is placed deeply and draws together tightly the hardened and callous cellular tissue which forms the wall of the canal. The suture, which should be strong and smooth, is passed deeply from side to side, just below the lower extremity of the orifice; then subcutaneously a little distance, then back again to the other side, and so on until the opening of the anus is all involved in this series of transverse stitches; a second suture passed in the opposite direction, the same points of entrance and exit in the skin being observed, completes the circuit and enables the operator to readily appose and retain the walls of the fistula. The needle used is one of moderate curve, with the eye near the point. After the sutures are passed, the surface of the fistulous tract is thoroughly refreshed and its external edge is drawn together by an ordinary interrupted suture.

The writer concludes very candidly:—"The lesion is thus reduced to a simple wound, and we ought to expect union by first intention, if the general condition of the patient is good. Concerning the results of this method only conjecture is at present possible, since the confirmation of experience, without which all theories are good for nothing, is as yet absolutely wanting. One argument in its favor may, however, be offered; the patient is not obliged to undergo an operation, properly so called, and does not suffer any loss of tissue."

Medical and Surgical Journal.

BOSTON: THURSDAY, DECEMBER 29, 1870.

THE RELATION EXISTING BETWEEN MOVABLE KIDNEYS AND HYSTERIA.

WE have lately received several numbers of the *Medizinisch-Chirurgische Rundschau*, published in Vienna, a monthly review of current medical literature. Each number contains a short but full abstract of the principal articles of interest in the English, French, German, American and other medical journals, under separate heads for pathology and clinical medicine, pharmacology, therapeutics, surgery, midwifery, ophthalmology, physiology, anatomy, &c. This year's volume is the first of a new series, and it is valuable, as it contains extracts from many journals—Italian, Danish and Norwegian—which we do not usually see in this country.

In addition to the above-mentioned monthly retrospect, there is a department for criticism of new works and one for original communications. From the latter we make an abstract of an article by Dr. R. Chrobak on "Movable Kidney and Hysteria." On account of a remark made by Oppolzer in regard to the relations existing between movable kidney and hysteria as cause and effect, the author was led to a study of these two conditions, and had opportunity during three years to observe 19 patients with movable kidneys, 16 in Oppolzer's clinic and 3 others. Three times there were no subjective symptoms accompanying the anomaly. Eight times there was trouble which could be referred either to the dislocation of the kidney or to disease of the same, and eight times there were unmistakable symptoms of hysteria. In these eight there were found, besides the dislocation of the kidney, once supra-vaginal hypertrophy of the vaginal portion, with prolapsus; once, prolapsus vaginæ; twice, descent of the uterus; three times, flexions, with uterine and vaginal blennorrhœa.

Of the other two, one was a virgin of 27 years, who had a movable kidney on the right side and also a moderate catarrh of the vagina. After several weeks' treatment the vaginal catarrh was cured, but nevertheless the patient still suffered from the symptoms of which she had previously complained :—intercostal neuralgia, megrim and globus hystericus ; the other patient, 45 years old, with movable kidney on the left side, was seen only once ; she had had several children, yet her genital organs were perfectly normal, and she could not remember having had genital disease at any time of her life. The beginning of her suffering—mental depression, heaviness, fulness in the abdomen, swelling of the abdomen, vomiting, cramps in the stomach, strong pulsation of the aorta, sensation of a girdle around the abdomen, megrim, hyperæsthesia of the scalp—was clearly referable to the time when the movable kidney was first noticed.

These two observations led the author to think that hysteria might be referable to a movable kidney as cause.

" In reference to the combination of symptoms in hysteria, there is no disagreement among the authorities, but there is very considerable discrepancy in reference to its cause. Apart from the question as to whether hysteria is a disease of the whole nervous system (Scanzoni, Hasse, Niemeyer and others), or an exclusively cerebral disease (Wunderlich), Romberg refers it, as a reflex neurosis, to anomalies of the genital organs ; others seek its cause in a disturbance of the nutrition of the nervous system in general (Niemeyer, Hasse and others), or caused by anæmia (Valentine); others give a large amount of influence to hereditary taint (Wunderlich, Amann)."

The author sides with Romberg.

The opponents of this view support themselves on observations of hysteria without at the same time visible disease of the genital organs, and on the continuance of hysteria after cure of the genital disease.

He does not consider these two arguments decisive. He allows that there are cases where hysteria may exist with a normal condition of the genitals, as in the two cases above mentioned ; but he also considers that the presence of insignificant changes of posture in the uterus, as slight falling, predisposes to hysteria more than serious disease does, and yet they may have passed by and been unknown or forgotten.

In cases where, after the cure of the uterine disease, the hysteria continues, an electric, dietetic or hydropathic treatment may produce favorable results. The author, however, has seen no case where the treatment of the hysteria was successful so long as the uterine disease continued uncured.

He then inquires how the existence of dislocated kidney in the two cases mentioned may be the cause of the persistence of the hysteria, whether of itself alone or by nervous connection with the genital organs.

" According to Frankenhäuser, a nervous network is formed by branches from the splanchnic nerves, from the first lumbar ganglion of the sympathetic, from the cœliac ganglia and the superior mesenteric plexus, with at least four ganglia, which are so grouped near the origin of the renal arteries that two lie near the aorta, one (ganglion renale primum) above, the other (ganglion renale secundum) below the renal artery.

" This under ganglion lying on the spot which must be first affected in dislocation of the kidney, sends branches to the deeper lying spermatic ganglion, and a large branch to the ovary. Into this nerve enter also branches from the spermatic ganglion.

" Concerning the function of the ovarian nerve hitherto almost nothing has been known. Experiments made by Frankenhäuser on the branches going from the spermatic ganglion have shown that irritation of these has caused contraction in the uterus, so that there are probably motor fibres remaining in these nerves ; therefore very probably the fibres separating from the ganglion renale secundum, of which a part, as mentioned, enter the ganglion spermatica, are of motor nature."

The author has made experiments on rabbits by irritating the renal ganglia. He often obtained contraction of the uterus, but could not be certain that other nerves were not at the same time irritated. Taking away the other ganglia of the sympathetic, he obtained no contraction ; but possibly the renal ganglia were not uninjured. He then irritated the nervus ovaricus at a distance from its origin, avoiding as far as possible mistakes which might arise from entrance of air into the abdominal cavity. He irritated the nerve in its course and also its peripheric end in a rabbit a few days pregnant, and saw energetic contraction commence in the abdominal end of the fallopian tube and extend to the uterus, which could not be confounded with the sluggish contraction caused by the entrance of air into the peritoneal cavity.

In other experiments he obtained similar results, but not with such precision that he could feel justified in drawing his conclusions without reserve.

Hs concludes that "there is a direct nervous communication between the kidneys and the genital organs, i. e., it is certain that a ganglion, which, according to its position, belongs to the kidney, sends one or more branches to the ovaries. Irritation of the lower part of this nerve gives a positive result. The possibility is not excluded that the motor fibres running in this nerve come from the branches which pass into it from the ganglion spermaticum (which besides also receives branches from the ganglion renale secundum); yet it is very probable, considering their number and the above-mentioned functional harmony of both organs, that the nervus ovaricus is the means by which the intimate relations between the kidneys and uterus exist."

Shoulder-tip Pain in Hepatic Disease.—In a most elaborate paper on the Shoulder-tip Pain and other Sympathetic Pains in Diseases of the Liver, read at the meeting of the British Medical Association in August last, by Dr. Embleton, the learned author advances a new explanation of the nervous connection between the liver and the top of the shoulder. First stating that according to his experience, the shoulder pain occurs much more frequently than is supposed by some writers, he remarks that it is "referred especially to the angular space between the acromial end of the spine of the scapula and the adjacent end of the clavicle, where the upper and outer part of the trapezius muscle, as it goes to be inserted into the bones just named, is lodged;" and adds:—

"At this part, the external branch of the spinal accessory nerve, after having supplied the sterno-cleido-mastoid, and anastomosed with the second and third cervical nerves, enters the trapezius, forming a small plexus with twigs of the third and fourth cervical nerves, and is continued on along the vertebral border of the scapula, supplying the trapezius in its course, and communicating with twigs of the intercostal nerves."

It is noticed that this pain, when severe, extends from the shoulder-tip downwards to the lower angle of the scapula, and occasionally upwards along the side of the neck to the base of the skull, following the external branch of the spinal accessory nerve, which in such cases will be found tender to pressure, as will also the pneumogastric nerve of the same side. Pressure upon either of these nerves will sometimes aggravate the shoulder-tip pain, and, upon the vagus, will excite or increase pain in the liver.

"The course, distribution, and office of the external divisions of the spinal accessory appear not to be in doubt. That the internal division joins the trunk of the par-vagum at the ganglion of the trunk, and contributes to the formation of the pharyngeal and laryngeal nerves with the vagus, is not doubtful; but we are ignorant as to how far the remaining part of the spinal accessory, which is incorporated with the vagus, goes along with it, and we do not accurately know to which organs it is finally distributed. These two points are of necessity, from the nature of the parts, of most difficult, if not of impossible, determination by the scalpel. By some anatomists, the spinal accessory portion of the vagus is believed to be given to the lungs, heart and stomach, which it is said to animate, more or less, with motor power (Hirschfeld and Leveillé, *Nevrologie et Æsthésiologie*, 2me edition, Paris, 1866, p. 218 *et seq*). If this be true, there seems to be no reason why the liver, kidneys, and other parts—such as the supra-renal bodies, the pancreas and the small intestine—should not receive branches from the spinal accessory as well as from the vagus itself. In such case, we should have the seat of the sympathetic pain supplied by the external division, and the seat of disease in the liver supplied, in part at least, by the internal division of the same nerve—the spinal accessory—the two branches being in intimate connection beneath the skull. But, although it is probable that the internal branch of the spinal accessory is distributed to the same organs as the vagus itself, there are not as yet sufficient anatomical grounds for such a conclusion. It nevertheless appears that the par vagum, accompanied or not by the spinal accessory, does reach the liver, either directly from the gastric branches themselves, or indirectly from them through the great sympathetic ganglia; but the accounts of anatomists as to the mode and the amount of nervous supply to the liver, vary greatly from each other."

Numerous authors are cited to show the discrepancy referred to, though agreeing as to the main fact of the pneumogastric supplying the liver in some part at least.

The whole question of so-called sympathy between distant parts is one of much physiological interest, and every research is of value which tends to remove it from the domain of "vital" mystery and to confirm the law that sympathetic pain indicates nervous continuity.—*New York Med. Gazette.*

A BICEPHALIC MONSTROSITY.—M. R. HACKEDORN, M.D., contributes the following to the *Medical and Surgical Reporter*:—

I desire to furnish to your numerous readers a brief general description of the latest great medical curiosity. The curiosity consists of a pair of twins, whose novel attachment to each other is exciting so much attention.

The twins at the present time are almost three weeks old. They measure nineteen inches in length from the crown of one's head to the crown of the other. Their weight at birth was ten pounds. They have fine, well-shaped heads, good features, light hair and dark eyes, good arms, and each a well-formed chest; but from one chest to the other there extends a common abdomen. At the middle of this abdomen is seen the one umbilicus for the two children, and running down from this to the mons veneris, on one side, is seen a fine line like a seam.

They are said to have a continuous spine from one occiput to the other, but the back I was not allowed to examine, and cannot therefore state positively. As they lie on their backs on a pillow, one head at one end and the other head at the other end, their faces looking toward each other, we find on one side of them each child has a perfect leg and foot, with the exception that one foot is in a condition of talipes varus. Between these hips appear the vulva and anus, the common outlets for both. On the opposite side of the children, standing perpendicularly, is a deformity that seems to be a consolidation of the two legs on that side. It seems to have but one bone in the thigh, but two large bones, with a deep sulcus between, are found in the leg proper. The foot resembles the early blending of two feet, for two ossa calcis are seen, and eight toes, with the greater toes outermost, and the least ones side by side. Free motion at the attachment of this deformity to the body or bodies, but little motion in the knee, and still less in the ankle.

These babes had one cord and one placenta, and these not unusual in size.

Labor lasted only twenty-five minutes, and no doctor in attendance. They are separate beings, as manifested by their wills. Each is independent of the other, as shown by their performing different acts at the same time. One will go to sleep and the other remain awake. One nurses at one time and the other at another time, and the nursing of one does not satisfy the other.

When one has a passage from the bowels, the other does not seem to take any cognizance of it. They rest well, and as they seem to be in thriving condition, I have no doubt they will live, subject, of course, to the chances of life, just as other babies.

The family to which this curiosity came, lives ten miles south of Cardington, Warren county, Ohio.

The father, Mr. Finly, is a native of Pennsylvania, forty years old, and a man of rather inferior intellect. The mother is an Ohioan, thirty-three years old, and of average intellect. The parents have three children, the eldest being thirteen years old.

The mother says she never suffered from fright during her pregnancy, nor ever had any subject in her mind that might have had any influence on the contents of her womb. She is inclined to place the blame of their peculiar condition upon a fall she received when she was about two months advanced in pregnancy. The children at the latest accounts are prospering finely.

ANALGESIA IN VERTEBRAL CARIES, COMPARED WITH THAT IN HYSTERIA.—ROSENTHAL, the author, describes at length two cases of angular curvature, associated with chronic myelitis and local anæsthesia and analgesia. Charcot, in one case of hysteria with chronic contraction of the extremities, has observed sclerosis of both lateral columns and disappearance of the anterior roots; all other observations in cases of hysteria have resulted negatively. The points of resemblance between hysteria and myelitis are:

1. Slight cases present only analgesia. As the intensity of the disease increases, anæsthesia is added, following a centrifugal course; and anæsthesia is usually the first to disappear during recovery. This coincides with what Schiff demonstrated as occurring after section of the gray substance, and with what the author himself has observed in a case of traumatic lesion of one lateral half of the cord, and two cases of vertebral caries with disease of the nerve-cells of the gray horns.

2. Anæsthesia and analgesia in hysteria always observe the limits which Voigt describes as bounding the cutaneous nervous ramifications. This is also the case in spinal paralysis.

Assuming that the spinal cord is the seat of the morbid processes which give rise to many cases of hysteria, we infer that simple diminution of the facility of transmission gives rise to analgesia, merely; that central lesions coincide definitely with peripheric; that anæsthesia and analgesia of the upper and lower extremities imply an affection not solely of the corresponding part of the posterior columns and gray matter, but *ex contiguo*, usually that of the gray mass of the anterior horns, and hence motor paralysis.—*Vierteljahrschrift f. d. prakt. Heilkunde.*

Blessings on the Doctors. By Henry Ward Beecher.—The Doctor's chaise! Well, what is there about it that differs from any other vehicle? It is built like all other chaises, and the horse was bought where other horses were bought, and the harness is not noticeable. And yet, do you ever see the doctor's chaise go by with the same feelings, or no feelings, with which you see others? I do not. Here he comes. His face is dull and careworn. The case is bad, undoubtedly. He has been out all night. May be, after a long and desperate fight, he is defeated. Or he sees it is a matter only of hours, and that defeat is certain. Or perhaps his face is cheery and smiling. Good news from the sick-room! The child has passed the crisis! The family are exultant, the doctor is radiant. Or, may be, he looks only fagged and weary. No very critical cases. A great many fussy maladies. Ride, ride, ride, all day and half the night, without anything to excite, and everything to fatigue.

I wonder how doctors look at people on the street. Is their eye out for symptoms? Are men all medical specimens? Do they think of organs, of developments, of temperaments?

An artist would exclaim, "What a superb figure that is for a hero!" But the doctor is saying, is he not? "A splendid case for anatomy that body would make!" The artist: "What color! What a complexion?" The doctor: "That hectic contrast of white and red shows mischief is brewing."

I wonder if sextons look on the world with professional eyes? Do they listen to their minister with an under-thought of what a splendid funeral he would make? Do they take men's lengths as they meet them? Do they classify them as first-class coffin men, second-rate coffin men, cheap coffin men?

But to return to doctors. There stands the doctor's horse over the way. At just about the same hour it has been there for two weeks past. Who can be sick? The house looks cheerful enough outside. There is no sign of sadness. But inside—what is going on? We imagine all the supposable cases—the father, the mother, the little child, the grandmother? It's no use. The house is silent. All that we know is, that at about ten every morning the doctor's chaise stands before the house for about an hour, and its presence throws a shadow on the dwelling.

Blessings on the doctors? How they are pelted! How many squibs are fired at them! How many standing jokes and current stories are kept up at their expense! And yet, when a fellow is sick, he bundles all his stories and jokes out of the window, sends for his doctor, and protests that he feels better just to look upon him!

If the house is sad, if the trouble grows, if the flower of the family seems likely to be cut off, on the doctor leans the whole household. His coming and going are the sunrise and sunset of the day. His word is waited for as never were the responses of the Oracles. His reserve and anxiety infect the whole household. His surprise and exclamation of pleasure send exultation through every heart. For the hour he is as a god. And if recovery ensues, he is heaped with praises, and his fame spread abroad with willing tongues. But if, after a brave battle, watched unceasingly through day and night, he is overborne, all sympathize with the friends, but how few think that the doctor needs pity, sympathy and comforting! And yet there are cases in which no one suffers so acutely as the physician, when the shadow falls and the light is gone out.

A good man adopts his patients. As long as they are in peril they belong to his household, even if they be uncouth and not lovely; but how much more when they are comely and lovable. He clings to a friend's child as if it were his own, and seeing afar off things which must happen, hidden from others, how often he carries fear and sorrow under a smiling face, and chokes down ill-omened words by words of simulated courage.

Blessings on the doctors. We think well of the country doctor's saddle-bags, and the city doctor's prescriptions. But far more are we in sympathy with the doctor's kind heart, his generous labor, his self-denying zeal, his gladness at others' joy, and his silent sorrow for others' sufferings and bereavement.—*New York Ledger.*

OFFICIOUS PEOPLE.—Officious people can never leave things alone. No one can possess his soul in peace or go his own way unhindered of them. They stand at the cross-roads of all men's lives, pointing out to them the path they ought to take, and, whether in religious faith or in house-furnishing, the choice of a wife or the pattern of a boot, have their word to say, their advice to give and their fingers to dip, whatever may be the pie that is making. Illness is one of their strong points, and if they hear that you are indisposed, whether slightly or gravely, they rush off to proffer advice, which you do not want and will not accept, and which probably would turn out a mistake if you did accept. Your disinfectant is not equal to theirs, and they have brought you the name and address of the chemist where you can get theirs. Your nurse does not know her business; let them send for one of their own choosing to-night. Your medical man says you are suffering from a certain form of illness. Well, of course he ought to know; but to the officious it seems very much like something else; or, if they do not go quite so far, they inquire, with the air of knowing all about it, whether he had not ordered such and such things to be done; and, if you say no, they urge you to have their own medical man without delay, as they are so sure yours is making a mistake. And so on, till they have worried you into a fever; when they take their leave and bewail your obstinacy to the next comer. Any calamity is a god-send to them, for they have their innings when their neighbors are so prostrate by distress that they can buzz about them at their will. They are self-naturalized Samaritans, physicians without diplomas, ministers independent of orders or the Apostolic succession; and the unlucky ones whom it is their pleasure to assist must either keep them off with a strong arm, which may lead to a quarrel, or yield themselves helplessly into their active and officious hands.—*Pall Mall Gaz.*

THE *British Medical Journal* thus discourses of Dickens as an observer of disease and death:

"How true to nature, even to their most trivial details, almost every character and every incident in the works of the great novelist whose dust has just been laid to rest, really were, is best known to those whose tastes or whose duties led them to frequent the paths of life from which Dickens delighted to draw. But none, except medical men, can judge of the rare fidelity with which he followed the great Mother through the devious paths of disease and death. In reading *Oliver Twist* and *Dombey and Son*, or *The Chimes*, or even *No Thoroughfare*, the physician often felt tempted to say, 'What a gain it would have been to physic if one so keen to observe and so facile to describe had devoted his powers to the medical art.' It must not be forgotten that his description of hectic (in *Oliver Twist*) has found its way into more than one standard work, in both medicine and surgery (Miller's *Principles of Surgery*, second edition, vol. i. p. 111; also several American and French books); that he anticipated the clinical researches of M. Dax, Broca, and Hughlings Jackson, on the connection of right hemiplegia with aphasia (*vide Dombey and Son*, for the last illness of Mrs. Skewton); and that his descriptions of epilepsy in Walter Wilding, and of moral and mental insanity in characters too numerous to mention, show the hand of a master."

A DENTIST in Philadelphia has traced out the career of 1,000 dentists, with this result: 163 died before they reached middle life, 643 attained fair success, 57 made fortunes, 27 died from intemperance and other vices; 96 failed entirely; and 3 committed suicide.

Medical Miscellany.

THE leading article in our first number of the new volume, which commences with the issue of next week, will be from the well-known pen of ALEXANDER YOUNG, Esq., and entitled Criminal Malpractice.

EFFECTS OF GALVANIZING THE SYMPATHETIC NERVE.—From numerous experiments in galvanizing the great sympathetic in the lower animals, M. C. Peyrani (*Gazette Médicale*) concludes that:—

1. The quantities of urine and of urea are increased in proportion as the strength of the voltaic current is augmented.
2. When galvanic currents of the same intensity are employed, the induction current produces a much greater elevation in the quantities of urine and of urea than the constant current.
3. If the sympathetic be divided, and not excited by galvanism, the quantities of urine and of urea are reduced to their *minimum*.
4. If the sympathetic be divided in the neck, and its peripheral end be galvanized, the quantities of urine and of urea descend much below the normal standard, although above the results obtained without section of the sympathetic.—*N. Y. Medical Gazette.*

MANUFACTURE OF OZONE.—Mr. Loew, of New York, has discovered that ozone is formed in rapid combustion. The German chemist, Carl Thaur, finds the observations of Mr. Loew to be correct.

A small quantity of ozone is always found in that part of the air which is immediately in contact with the lower part of the hydrogen flame, and its presence can be shown by drawing the air through a glass tube. The point of the tube ought to be inserted into the lower half of the flame, and the draft must be strong enough to divert the flame a little from the perpendicular, but not enough to draw the unconsumed gases through it, as they at once destroy the ozone. Burning charcoal yields no ozone, for the reason that the carbon absorbs both atoms of oxygen to produce carbonic acid. This method of the formation of ozone is of great interest, and may eventually lead to its practical application in bleaching and disinfecting. It would appear to be a cheaper and a better way to evolve the active oxygen than by electricity.—*Medical and Surgical Reporter.*

INFLUENCE OF THE PANCREAS ON FAT.—According to Dr. Dobell, "the influence exerted by the pancreas upon fats appears to be by breaking up the aggregation of the crystals of the fat, and altering its hydration. It alters the molecular condition of the fat, mingling it with water in such a way that even ether cannot separate the fat from the water. A permanent emulsion is thus formed ready to mix with a larger quantity of water whenever it may be added. The pancreas, therefore, in acting upon fat, does not decompose it into fatty acid and glycerine; the absence of glycerine from the watery stratum and the presence of the glycerine in the pancreatized fat of the ethereal stratum having been demonstrated. It is well known that, in addition to the influence of the pancreas upon fat, it has the power of converting starch into glycose by simple mixture. This property remains to a certain extent after the pancreas has exhausted its property of acting upon fat. The quantity of pancreas that before mixture with fat will convert about eight parts of starch into glycose, after saturation with fat will still convert about two parts of starch into glycose.—*Proceedings of the Royal Society*, No. 97.

LOSS OF SPEECH AFTER CHLOROFORM.—A servant girl, says the *Allg. Med. Centr. Zeit.*, for the sake of the extraction of a tooth, inhaled chloroform for a short time. On awaking, she had lost the power of speech, could not utter any sound whatever, and remained in that state for five weeks, in spite of various remedies, especially electricity. After this time she began to speak in a low tone, and was put under appropriate treatment. It is supposed that she suffered during anæsthesia from rupture of some cerebral vessel.—*Detroit Review of Medicine and Pharmacy.*

THE Title-page and Index of Vol. VI. have not been completed in season to accompany this number of the JOURNAL, and will probably be sent with next week's issue.

PAMPHLETS RECEIVED.—The "Rubber Air-Cushion" in the Treatment of Complicated Fractures and other Serious Injuries of the Lower Extremities, with Illustrative Cases. By L. D. Mason, M.D., New York. Pp. 12.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending Dec. 24, 1870.

Cities and Towns.	*No. of Deaths.*
Boston	89
Charlestown	8
Worcester	12
Lowell	17
Milford	4
Chelsea	8
Cambridge	19
Salem	9
Lawrence	7
Lynn	5
Gloucester	4
Fitchburg	3
Newburyport	5
Somerville	3
Fall River	8
Haverhill	2
	203

Prevalent Diseases.	
Consumption	41
Croup and Diphtheria	13
Pneumonia	11
Typhoid fever	10
Scarlet fever	9

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, Dec. 24th, 89. Males, 43; females, 46. Accident, 5—apoplexy, 2—disease of the bladder, 1—disease of the brain, 2—bronchitis, 1—congestion of the brain, 1—cancer, 3—consumption, 16—convulsions, 3—debility, 5—dropsy, 1—dropsy of brain, 2—diphtheria, 3—"exposure," 1—erysipelas, 1—scarlet fever, 4—typhoid fever, 6—gangrene, 1—disease of heart, 7—laryngitis, 1—disease of the liver, 1—congestion of the lungs, 2—inflammation of the lungs, 2—marasmus, 1—old age, 2—pleurisy, 1—premature birth, 2—peritonitis, 1—puerperal disease, 1—rheumatism, 1—disease of the spine, 1—whooping cough, 1—unknown, 7.

Under 5 years of age, 25—between 5 and 20 years, 7—between 20 and 40 years, 21—between 40 and 60 years, 17—above 60 years, 19. Born in the United States, 60 Ireland, 22—other places, 7.

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